

## THE ACADEMY.

"INTER SILVAS ACADEMI QUÆRERE VERUM."

Vol. III.—No. 61.

Readers are reminded that the mention of New Books, Articles, &c., in our lists is intended as a guarantee of their importance. The Editor of THE ACADEMY cannot undertake to return communications which are not asked for.

The Editor cannot reply to questions from authors respecting the notice of their books.

The next number will be published on Monday, December 16, and Advertisements should be sent in by December 11.

## General Literature.

**Shelley's Early Life;** from Original Sources. With Curious Incidents, Letters, and Writings, now first published or collected. By Denis Florence Mac Carthy, M.R.I.A. Hotten.

THE main object of this volume is to set forth the facts of Shelley's life, as connected with his journey in 1812 to Ireland, where he advocated Catholic emancipation, and more especially repeal of the Union. Mr. Mac Carthy made this subject his own many years ago; and whatever has been said since then by other writers, with some approach to detail or accuracy, has been due very principally to him. He has now carried the investigation much further, enlarged upon the facts, rectified a number of small or less small errors, and shown with some completeness the true bearings of this episode in an illustrious life.

The volume consists of two classes of subject-matter—one which is proper to Mr. Mac Carthy himself, and the other to Shelley. The latter consists of Shelley's various political pamphlets: the *Address to the People of Ireland*, the *Proposals for an Association of Philanthropists* for the benefit of Ireland, the *Declaration of Rights*, the *Proposal for putting Reform to the Vote throughout the Country*, and the *Address to the People on the Death of the Princess Charlotte*. The last two do not exactly belong to Mr. Mac Carthy's theme; but all Shelleyan students will be obliged to him for having added them, and so made the collection of Shelley's strictly political pamphlets complete. They are all rare, if we except the *Declaration of Rights*, which, having been republished in the *Fortnightly Review* by the present writer in 1871, has become accessible to all readers. The *Address* concerning Princess Charlotte had also been reprinted, and is less scarce than the others, which very few people had ever seen, and which were practically unattainable. By far the best of these is the *Reform* pamphlet, written in 1817, when Shelley was about twenty-five years of age. The two Irish pamphlets, written in 1812, are tedious and inflated productions, though it cannot be said that they are devoid of sound advice, while, for generosity of spirit and high-souled scorn of oppression, they are naturally conspicuous. The earlier of the two effusions, the *Address*, full of lumbering repetitions, was purposely written down to the capacity of the uninformed classes of Irish people: if it hereby gains in clumsiness, at least it loses somewhat in bombast; but the *Proposals for an Association of Philanthropists* make up for all arrears in this direction. There are two other pamphlets by Shelley which ought to be rescued from oblivion; but, not being of a political character, they could hardly, under any circumstances, have found a place in Mr. Mac Carthy's book. The first of these is the *Refutation of Deism*, pub-

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lished in 1814: Mr. Mac Carthy seems to suppose that no copy of this dialogue is now known to be extant, but there is at least one, in the possession of Sir Percy Shelley. Its precise object (I am told by a gentleman who has looked into it) is to show that there is no tenable medium between Atheism and Christianity, coupled with an ironical championing of the latter. The second of the two tractates referred to is the *Essay on Devils*, never yet published, but existing in manuscript, or perhaps even in print.

The reprint of Shelley's pamphlets in Mr. Mac Carthy's volume occupies 98 pages out of 408. The remaining 310 pages have as their nucleus one fact, which is indeed the chief contribution to Shelley's biography furnished by this book—viz. that the poet, while still at Oxford in 1811, published in London a poem termed *A Poetical Essay on the Existing State of Things*, "sold by B. Crosby and Co., and all other Booksellers." It was advertised as "By a Gentleman of the University of Oxford" (the same phrase as in the title-page to Shelley's novel of *St. Irvyne*), "for assisting to maintain in prison Mr. Peter Finnerty, imprisoned for a libel": its price was two shillings. An advertisement to the foregoing effect appeared in the *Oxford University and City Herald* of 9th March 1811. The evidence that the poem thus advertised was by Shelley is merely inferential, but may nevertheless be regarded as sufficient. It is simply this: that the *Dublin Weekly Messenger* of 7th March 1812, at which time Shelley was in Dublin, contained an article about him, written in all probability by the well-known political agitator John Lawless, wherein occurs the following passage: "Mr. Shelly, commiserating the sufferings of our distinguished countryman Mr. Finerty, whose exertions in the cause of political freedom he much admired, wrote a very beautiful poem, the profits of which, we understand, from undoubted authority, Mr. Shelly remitted to Mr. Finerty: we have heard they amounted to nearly an hundred pounds." Mr. Mac Carthy fairly argues that, as Shelley sent to Godwin this number of the *Weekly Messenger* without in any way controverting the statement which it contained affecting himself, he practically confirmed its truth. Our author therefore made zealous research for anything to explain or verify the allegation in the *Dublin paper*. At last he traced out the advertisement above referred to in the *Oxford Herald*, and putting the two things together, he comes to the firm and, I think, the safe conclusion that the writer of the *Poetical Essay on the Existing State of Things* was Shelley. Of the poem itself, however, Mr. Mac Carthy has not, after extensive and reiterated enquiry, succeeded in obtaining the least vestige. He tells us who Mr. Finnerty was—an Irish printer and press writer and reporter, who, after suffering the pillory and imprisonment as printer of *The Press* newspaper in Dublin, endured another incarceration of eighteen months in Lincoln Gaol for an alleged libel on Lord Castlereagh. He was undergoing this sentence at the time that Shelley came forward on his behalf: and he died on the 11th of May 1822, only a couple of months before the author of the *Poetical Essay* and of many other less perishable verses.

Mr. Mac Carthy is entitled to the whole credit of ferreting out the *Poetical Essay*, and identifying it with Shelley as author: but he goes a little too far in assuming, as he appears to do throughout his book (and especially on p. 4), that no hint had ever before been given of the publication by Shelley of any poem to which this volume is found to correspond. In the memoir of Shelley (p. xli) which I published in an edition of his works at the beginning of 1870, there is a note which says: "Everything that is known on this subject [the volume named *Original Poetry by Victor and Cazire*, printed in 1810] is due solely to Mr. Garnett:

see his article in *Macmillan's Magazine*, June 1860, *Shelley in Pall Mall*. He has kindly informed me, moreover, that a gentleman connected with the Shelley family says that Percy 'wrote and printed another book of verse about the same time. He could not remember the title, but thought a copy might still be in existence.' This "other book of verse" must, to all appearance, be the *Poetical Essay*; for even the unwearied and minute researches of Mr. Mac Carthy regarding this period of Shelley's life have not brought to light anything else to which the statement could be supposed to apply.

Next to this of the *Poetical Essay*, the most important point brought out in the volume before us is that Shelley's Oxford friend, Mr. Thomas Jefferson Hogg, so far forgot himself as to make love to Harriett Shelley (late Miss H. Westbrook) very soon indeed after being first introduced to her, and consequently very soon after Percy and Harriett had become man and wife; and that this discreditable escapade, which occurred in York in October 1811, caused a total estrangement between Shelley and Hogg for about a year ensuing. Mr. Mac Carthy, it is true, does not state this matter in absolutely plain and unmistakable terms: he does not give the name of Mr. Hogg at the decisive moment (p. 300), but only refers to "one of the earliest chosen and the most boastful of the number" of Shelley's friends. However, putting together this passage and various others in the volume, there can be no mistake as to what Mr. Mac Carthy means. Moreover, I am aware that what he thus intimates is based upon very explicit statements in letters written at the time by Shelley, which I had myself read through before completing my memoir of the poet; and Mr. Mac Carthy best knows what chance he would have had of tracing them out through his own unaided endeavours. The many extracts which he gives from letters addressed by Shelley, and occasionally by Harriett, to Miss Hitchener, and which form perhaps the most valuable and entertaining portion of the present volume, all come from this correspondence. The revelation now made by Mr. Mac Carthy concerning a friend who "attempted to seduce my wife" (to cite the precise expression in Shelley's letter to Miss Hitchener) may explain to the reader of my memoir of Shelley what was meant by a passage, purposely reticent, in a note (p. lxxv): "I have good reason to know that, at an earlier period of his wedded life, his disrespect for the marriage tie was by no means such as to make him tolerant of conduct which he regarded as an interference with its obligations in his own and Harriett's case." Again, the explanation which Mr. Mac Carthy offers (p. 117) of Shelley's Wertherian prose fragment, connecting it with this same affair of Hogg and Harriett, amounts simply to the suggestion which my memoir contains (p. clxxiv): "In this year [1813], or perhaps earlier, he commenced a sort of variation of Goethe's *Werther*, from which Hogg gives an extract. An accomplished Shelleyite has suggested to me that this excerpt (a letter purporting to be written to Werther by the husband of Charlotte) may be less merely Wertherian, and more directly personal to Shelley himself, than Hogg allows the reader to infer. Without adopting this view of the matter, I recognise it as admissible: if it is correct, the fragment probably belongs to the end of 1811, or beginning of 1812." A word should here be added as to the question of Mr. Hogg's real culpability in this matter of love-making to Harriett. As before stated, it is most certain that Shelley charged him with attempting to seduce her, and also with inciting the poet himself to fight a duel, and so save the wounded honour of both parties: but we are not obliged, nor indeed allowed, to take Shelley's conception of the facts, in all instances, as a true picture of them. Shelley

apparently knew nothing of the affair save what Harriett told him, eked out perhaps by not over-friendly confirmatory hints from her sister: he does not seem to have come to any personal explanation on the subject with Hogg, but only to have interchanged letters with him about it: and it is extremely conceivable that Hogg, as soon as he perceived Shelley to be grave or warm on this delicate topic, turned bantering and elusive. If we suppose—what is abundantly probable—that the inexperienced school-girl Harriett exaggerated a little in narrating to Shelley the passages of a flirtation got up by the cynical young man from the University, and—what is practically certain—that Shelley's imagination was not behindhand in making a blaze out of such suitable fuel supplied to it by Harriett, we shall conclude that "attempted seduction" of the latter is not proved against Hogg—although it is difficult to doubt that his conduct was rightly open to animadversion and suspicion.

Two other interesting points which Mr. Mac Carthy has been the first to elicit relate to Shelley's Oxford career. He has found that the pamphlet which led to his expulsion from the University, *The Necessity of Atheism*, was announced for publication and sale—not merely, as had hitherto been supposed, circulated in a semi-private way by himself. The following advertisement appeared in the *Oxford University and City Herald* of 9th February 1811: "Speedily will be published, to be had of the Booksellers of London and Oxford, *The Necessity of Atheism*. 'Quod clara et perspicua demonstratione caveat pro vero habere mens omnino nequit humanæ.'—*Bacon de Augment. Scient.*" [It is obvious here that "caveat" and "humanæ" are misprints for "careat" and "humana": whether the misprints occur in the advertisement itself, or in Mr. Mac Carthy's reproduction of it, I am unable to say.] Further, Mr. Mac Carthy has found that, about the time of Shelley's stay at the University, and not beyond that time, six pieces of verse, original and translated, appeared in this same paper, *The Oxford Herald*, some of them signed "S." and others "Versificator," and he surmises that these may be by Shelley. He extracts these effusions, and rather strongly pronounces for the Shelleyan authorship of the one original specimen, named *Ode to the Death of Summer*: a conclusion as to which I should take leave to dissent from Mr. Mac Carthy, as the poem does not appear to me to resemble, in any marked degree, those which Shelley had composed up to that date, and still less the immortal products of his maturer years.

Partly perhaps on account of the affair with Harriett Shelley, already referred to, Mr. Mac Carthy exhibits a great dislike of Mr. Hogg, and a total contempt of his *Life of Shelley* as an authority: nor, indeed, has there been any time, since the date of the publication of that most diverting book, when its gross inaccuracy in detail, and its recklessly overcharged portrayal of facts, could be matter of uncertainty. Mr. Mac Carthy is especially severe on the slighting account which Hogg gave of the whole of Shelley's Irish expedition, including the statement that the poet was howled down by Roman Catholics at a public meeting when he urged on their consideration the rightful claims of Protestants. In all this matter Mr. Mac Carthy corrects many details, and elucidates many more, some of them of substantial interest: but, on the other hand, he seems himself a little too much inclined—accepting as he does the various statements favourable to Shelley's oratorical efforts in Dublin, and to his Catholic auditors—to ignore all allegations that tell in the opposite direction, even though these may not involve any real contradiction of the other assertions, but only supplement and modify them. Sometimes the author's antipathy to Mr. Hogg makes him positively unjust to that writer, whose permanent and deep regard for Shelley ought not to



be called in question, whatever may have been the misdeemeanours of his youth, or the partly sarcastic (as well as partly enthusiastic) tone of his biography. Mr. Mac Carthy cites the expression of Hogg, "I cannot but confess that the poor fellow [Shelley] had many underhand ways"; and he adds, "The underhand ways here referred to may perhaps mean those opinions on the character and conduct of Mr. Hogg himself which, though unpublished, still exist in the handwriting of Shelley." This is wholly gratuitous, and, were it not probably the result of oversight, must be called most unfair and malicious. The fact is that Hogg has no sooner spoken of Shelley's "underhand ways" than he explains his meaning thus: "I should add that his underhand ways differed in one very important respect from those of other people. The latter were concealed because they were mean, selfish, sordid,—too bad, in one word, to be told: his secrets, on the contrary, were hidden through modesty, delicacy, generosity, refinement of soul,—through a dislike to be praised and thanked for noble, disinterested, high-minded deeds, for incredible liberality and self-sacrifice." Thus we see that Mr. Hogg, under an ironical phrase, only paid a very high tribute to his friend's memory in this instance.

The same habit of picking one sentence out of a whole passage, and consequently mis-stating the result, has produced an erroneous charge by Mr. Mac Carthy in my own case. On pp. 338, 339, he refers to the statement of Captain Medwin that Shelley, having left Ireland for the Isle of Man, and sailing thence in November, took a principal part in saving the vessel from a storm. He points out the inconsistencies of this narrative, and then proceeds: "And yet this absurd story and these unfounded statements have been repeated with a sort of parrot-like iteration by every subsequent writer who has undertaken to give us an account of Shelley's life,—except, indeed, Mr. Hogg, who generally commits himself to no one's nonsense but his own. They are adopted without the slightest hesitation by Lady Shelley and Mr. Rossetti." Now, my memoir of Shelley (p. lxvi) speaks of the matter in the following terms: "They experienced a storm near the Isle of Man, when Shelley, in the judgment of the skipper, who would receive no payment from him, saved the ship and its crew of three by his energetic and judicious exertions." To this very passage is appended the ensuing note: "It is not quite clear *when* this incident happened. Medwin (*Life*, vol. i. p. 177) says it was in November, and after the first Dublin sojourn; in the *Shelley Papers* he says it was in 1813 or 1814. If it was really in 1813, it must have been in going to or returning from the second Dublin sojourn. It cannot have been in 1814, nor yet in the month of November. Perhaps the whole story is apocryphal." This is a strange specimen of "parrot-like iteration," and of "not the slightest hesitation." The citation of this passage, and of that from Mr. Hogg's book, may perhaps suggest to Mr. Mac Carthy a little more caution in pronouncing other people to be in the wrong: although, as I have already said, he has undoubtedly corrected several errors of detail appearing in preceding accounts of Shelley, mine included—for which I am heartily obliged to him.

The solution offered by Mr. Mac Carthy of the alleged attempted assassination of Shelley at Tanyrallt, in February 1813, appears to me altogether extravagant. He thinks that Miss Hitchener (the schoolmistress from Hurstpierpoint who had recently been an inmate of Shelley's house, and whom he had now parted from, and termed "The Brown Demon"), or Miss Hitchener's father, may have been at the bottom of it. The father, it seems, was a publican near Hurstpierpoint, who had in his earlier years been a smuggler,

and whose real surname was Yorke. Shelley engaged to make some pecuniary allowance to Miss Hitchener after she had left his house: but Mr. Mac Carthy conjectures that this promise may have remained unfulfilled, and that Miss Hitchener or her father, after expostulations and threats, may have prompted some one to undertake an illegal *coup de main*. Considering the distance between Hurstpierpoint and Tanyrallt, and all the other circumstances of the case, it appears to me that if we term Mr. Mac Carthy's solution of the mystery "not impossible," we treat it liberally. I may take this occasion to mention a fact not apparently known to writers about Miss Hitchener—that she too was a "poetess," though of rather a different class from Percy Bysshe Shelley. In 1822, Messrs. Black, Young, and Young of Covent Garden, published *The Weald of Sussex, a Poem by Miss E. Hitchener*. It has no literary value, though there is a certain display of erudition in the poem and its notes: it shows that by 1822 Miss Hitchener had ceased to profess herself, as in the early days when Shelley so fulsomely and fatuously adored her, a "deist and republican."

Mr. Mac Carthy's book is not very easy for consecutive reading, as there is a good deal of repetition in it, and some scattering of its constituent elements, and a tendency towards making the utmost of every minute point that it raises—and not many of the points are of major importance. It is, however, a laborious and a thoroughly genuine accession to the biographical materials regarding Shelley, and will remain indispensable to all students of this period of his life.

W. M. ROSSETTI.

#### RUSSIAN FUNERAL LITERATURE.

Laments of the Northern District. [*Prichitaniya Sjevvernogo Kraja*.] Collected by E. V. Barsof Vol. I. Moscow.

In the north-east of Russia, especially in the neighbourhood of Lake Onega, the collectors of popular songs and stories have of late years found very much that is interesting and valuable. Thence have been drawn, to a great extent, the ample materials which have rendered so rich the collections of "metrical romances" and other poems due to the patient toil of such explorers as Ruibnikof and Kiréefsky. To the name of a third labourer in the same field, unfortunately, a mournful interest is now attached. Alexander Hilferding, the president of the ethnographical section of the Russian Geographical Society, was on the point of publishing the mass of popular poems which he had secured in that part of the country, when he started, a few months ago, to explore the district a second time. At Kargopol fever struck him down, and before many days had passed, he was laid in an untimely grave.

Of the poems which are current among the unlettered peasantry of this part of Russia, by no means the least interesting are the *prichitaniya*, or "lamentations," which are to be heard on the occasions of deaths, funerals, and festivals held in memory of the dead. Specimens of these have been given at various times, and in Ruibnikof's great work there occur, under the name of *zaplachki*, or "wailings," several of these dramatic dirges or keenings, remarkable for a singular kind of power as well as pathos. But no comparison can be made between any preceding collection of such poems and that for which we are now indebted to M. Barsof. His work is the first which has been entirely devoted to this branch of Russian popular poetry—one of which he has most satisfactorily proved the great importance.

Considerable time and space would be required to give anything like a clear idea of the merits of the poems which

fill 298 pages of this, the first, volume of M. Barsof's work. But it is possible to compress into a small compass some of the remarks which he makes in the excellent introduction which he has prefixed to them, and in the interesting account of funeral customs by which they are followed.

After mentioning some of the countries in which keenings and professional keeners have been and still are in vogue, M. Barsof proceeds to trace in the old chronicles the earliest record of their existence in Russia, proving, on the authority of Nestor, that *plachi*, or "laments," formed in Olga's time an indispensable part of the *trizna*, or "funeral feast," of the old Slavonians; showing how, when Oleg died, "all the people wailed over him with great lament," dwelling upon the "beautiful wail of Yaroslava" in the celebrated poem, *On Igor's Expedition*, and quoting from the lives of the (Russian) saints and other ancient records several extracts from funeral poems composed many centuries ago, but differing little from the metrical complaints in which the borderers on Lake Onega at the present day express their feelings towards their dead. Then he shows how the church attempted to put a stop to the use of such funeral chants, on account of the heathen sentiments which they breathed, sometimes even branding them with the name of "satanic songs," objugating them in sermons, and solemnly prohibiting them by the voice of the council held at Moscow in 1551. But neither the influence of the church nor even the power of Peter the Great was sufficient in this matter to bend the will of the people. Beside the bodies or above the graves of their dead relatives and friends the peasants insisted on indulging in their wonted expressions of grief; and so the old songs which had come down to them from the days of their ancestors continued to be sung in at least all the remoter parts of Russia. Of late years, however, they have lost much of their hold upon the affections of the people in general, and in order to hear them in perfection it is necessary to visit such outlying districts as those in which M. Barsof sought and found the materials for his work.

Much is to be learnt from these archaic poems with respect to the views of the old Slavonians about this life and that beyond the grave. In them Death is represented as a foe, who makes her appearance (*Smert* = *Mors* being feminine) in various guises. In vain does man attempt to struggle with her, and rescue from her grasp the beloved victim; at one time as a raven or a hawk, at another as a fair maiden or a crippled beggar, she glides into the doomed dwelling and cuts the thread of life. Vainly also is she beset by expostulations and tempted by promises; utterly inflexible she strikes the fatal blow. Sometimes, indeed, she (or Fate) is represented as enjoying the sufferings of her prey. As in all poems of this class, the action of dying is compared to the setting of the sun, the falling or disappearance of a star, the melting of snow, and the like. The actual moment of dissolution is held specially sacred, and it is the bounden duty of a relative or friend to watch beside "the painful couch," the "weary pillow," to keep guard while "the bright eyes are parting for ever with the white light," the soul is going forth from "the white breast." Bitterly do the wailers grieve over those corpses by which no watchers have sat at the last moment. The departing soul is sometimes described as a breath which is borne away by the winds, or, under the influence of Christian ideas, is received by one of the angelic host; sometimes it is pictured as a butterfly or a bird. The ideas expressed in the poems with reference to the existence of the disembodied spirits are of a twofold nature. Sometimes the soul is supposed to dwell in the grave, and so the carpenters who are constructing the coffin for a corpse are besought to make it a comfortable dwelling-place for its late tenant; at other times it is described as flying

together with other spirits among the clouds. But wherever their regular habitations may be, the souls of the dead are believed, and even expected, to appear to the living. Some traces may even be found, M. Barsof thinks, of a family cultus of the dead, and he quotes, as an instance, the lament which is sung by the dead man's kinsfolk, when they go through all the house and the outhouses which had belonged to him, as if expecting to find him in some part of his wonted home. So closely is the idea of the house-master connected with that of the Domovoy or house-spirit that, "if you say, 'I have seen the Master' (*Khozyain*), every *Zaonezhanin* (Beyond-Onega-Man) will think you mean that you have seen the Domovoy."

From these poems, says M. Barsof, an interesting picture of the hard life of the North might be constructed. In them may be seen, as in a mirror, the monotonous landscape, the gloomy forest, the dreary swamp, the scanty vegetation; in them also are portrayed the simple folk who have to maintain so constant a struggle with the forces of nature, their picturesque dress, their old-fashioned habits and customs. Of especial interest are the passages which refer to the family relations in the patriarchal mode of life which prevailed when their songs were originally sung, and which, in some respects, has not yet been materially altered. Each degree of relationship demands its own particular wail, and so we find special forms of lamentation, not only for parents and children, or brothers and sisters, but also for uncles, aunts, nephews, nieces, godchildren, first-cousins, first-cousins-once-removed, &c. Very interesting also are the poems which throw light upon the relations of the peasants with their communal authorities, or with the upper classes of officials and the clergy, of which nature are the laments for a *Starosta*, or village chief, or for a "pope," or a doctor, or for a *Mirovoi Posrednik*, or official arbiter. And no less interesting are the laments of a different kind, those devoted to persons who have been drowned, or struck by lightning, or who have committed suicide.

Over M. Barsof's most interesting account of the Olonets funeral customs we must now skim very hastily. Many of them are exceedingly remarkable, such as that of leaving openings, in which glass is sometimes set, in the coffin; that of placing in the coffin cuttings from the hair and the nails of the corpse, and also such things as bread, needles, and so forth; that of using as a remedy against ague the soap with which a dead body has been washed; that of (sometimes) singing wedding songs at the funerals of young girls, and many another of equal interest. His descriptions, also, of the funeral banquet and the memorial feast are most valuable, and so is the comparison he draws between the memorial festivals of the Olonets Slavonians and those (of a very similar nature) observed by the Ugrian Mordvins.

With an amusing description of the various *Vopenitsas*, or professional wailers, from whom he derived a great part of his valuable materials, and with "a North Russian glossary, together with general remarks on the language of the *Prichitaniya*," M. Barsof concludes the first volume of a work for the execution of which he deserves high praise, and which is of the greatest interest to every student of folk-poetry and of folk-lore.

—W. R. S. RALSTON.

#### LITERARY NOTES.

*Enigmas of Life*, by W. R. Greg (Trübner and Co.), is a book which deserves some attention as showing in a convenient compass how much—or how little—can be done in the way of constructive speculation without a foundation of fixed scientific principles. Mr. Greg is a reformer who believes in the perfect-



ibility of the species, while taking a very gloomy view of its actual estate; and a sceptic who cherishes some articles of faith which he knows to be uncertain. In his first essay, on "Realisable Ideals," he omits to explain whether by "possibilities" he means logical and mechanical, or what may be called historical, possibilities; and as the latter only can (and certainly will) be realised, his optimistic inferences lose a part of their weight.—Essays II. and III., "Malthus Notwithstanding," and "Non-Survival of the Fittest," discuss two aspects of the population difficulty, and in the interests of the moral and physical perfection of the race argue in favour of adjourning the theory and practice of Malthusianism until the whole of the habitable globe is evenly peopled with scientific farmers.—Essays IV. and V., "On the Limits and Direction of Human Development," and "The Significance of Life," suggest the doubtfulness of everything except the existence of good, which is treated more as an axiom than as an hypothesis, though the surrounding atmosphere is so sceptical as to warrant the assumption that the writer would not assert more than his own power of imagining a world which he himself would think excellent.—"De Profundis" and "Elsewhere" carry this subdued optimism a little farther, and develop the assumptions, which an interesting preface aims at justifying, of the existence of a Creator and a Future Life. Mr. Greg writes for those who look upon both as doubtful, and merely asserts his own belief as a fact, claiming a right to hold it till the negative is proved. He is severe upon the unphilosophic materialism of the Christian doctrine of the resurrection of the body, though it is certainly not from modern science that he acquired the counter conception of a life "elsewhere" for disembodied spirits. His argument is that human bodies are known to decay, and that their elements pass into fresh combinations, so that at the Last Day there might be thousands of claimants for a single particle of matter. But a materialist finds it least impossible to conceive the resurrection of an individual consciousness by supposing all the old material conditions of its activity to be somehow or other re-united, and, given a Providence, surely it might be trusted to arrange that no two men should die in the possession of the very same fragment of flesh. The theory of transmigration is a *via media* which would allow the contending souls to re-occupy their bodies in turn. It would be unfair to complain of vagueness in the conclusions of a book which begins with the admission "... enigmas which, at thirty, I fancied I might be able to solve I find, at sixty, I must be satisfied simply to propound." But asking riddles is endless work unless it is first agreed in which language (faith, reason, or sense) the answer is to be given.—The volume contains an unusual number of printer's errors.

M. Émile Montégut's "Impressions de Voyages et d'Art" (*Revue des deux Mondes*, November 1) continue as readable as ever. At Cîteaux the tourist learnt to understand the feud between the *gamay* and the *pinot*, the latter a vine growing on sunny slopes and producing the true *vin de Bourgogne*, the former a common "hypocritical" plant which ruins the fame of the nobler growth. The head of a reformatory for boys on the site of the old monastery assured him that the Parisian *gamins* were the most docile and corrigible. Beaune reminded him of Piron's satirical *Voyage à Beaune*, and Auxerre, which has erected a statue to Davoust, of several unpublished anecdotes which go to prove the marshal to have been more amiable than his reputation.

The *Cornhill* (December 1) contains a very happy appreciation of Nathaniel Hawthorne and the influence of his nationality on his genius. A suggested comparison with Charlotte Brontë illustrates the distance between his weird or airy fancies and the language of real passion or the delineation of intelligible character. A paper in the same number, on "Coincidences and Superstitions," borrows from the history of science some very curious instances of the former.

A new poem is announced by Julius Grosse (well known by *Das Mädchen von Capri* and other poems) under the title *Abul Kazim's Seelenwanderung*. It is supposed to be the narrative of a dervish, who describes his experiences in previous states of existence. The metre is that of Dante.

## Art and Archaeology.

Grimm's Life of Raphael. [*Das Leben Raphaels von Urbino. [Italiänischer Text von Vasari. Uebersetzung und Commentar von Herman Grimm. Erster Theil.] Berlin: Dümmler.*]

HERMAN GRIMM's contribution to Raphaellesque literature is an instalment of a larger work. It comprises Vasari's life of Raphael, turned, we know not why, into modern Italian by Professor Tobler, and the same text conveniently divided into chapters, reprinted in Italic fragments and commented at considerable length. Grimm's purpose seems to be, at some future period, to write a biography of Raphael for which these commentaries shall be a book of reference, enabling him to dispense with notes and tell his story without further interruption. His views and arguments will, he doubtless thinks, have been exhaustively put, and the reader will thus take the benefit of a continuous narrative which—we may surely predict—will have more than the usual attractions of Grimm's manner.

The questions which prominently arise as we read this first volume of commentary are important. Does Grimm exhaust the materials, artistic and literary, at his command, and does he make such use of them as will preclude the necessity of commenting his own commentary?

None who peruse this work with a previous knowledge of the subject will deny the vast reading, the comprehensive grasp of sources, and the subtlety with which conclusions are drawn. It is striking with what clearness problems of perplexing intricacy are treated; and it may be admitted that there is a natural plausibility even in the solutions from which we feel bound to dissent.

Nothing appears more interesting, in our opinion, than the short but telling essays in which Grimm, with the help of engravings and photographs, sketches the gradual transformation of Raphael's compositions, from their first imperfect conception to their final completion. We note in the course of these excursions a judicious and close criticism enlivened and adorned by sparkling lightness of style.

Guided by a casual observation of the Abbé du Bos which escaped earlier research, Grimm is enabled to name almost all the figures in the "School of Athens"; and it is probable that he might have gone further had he not been restrained by considerations which have since been ably combated by Scherer.\* Sidonius Apollinaris and Marsilio Ficino's *Plato* are the true and only sources from which Raphael's literary friends derived the subject of the "School of Athens"; and it will be difficult for future writers to contend that this vast and noble composition contains a single figure connecting the philosophers of Greece with the apostles and fathers of the Christian faith. We think, indeed, that here it will be necessary for Grimm to surrender his position as a trimmer between two different schools and to assert a decided and final opinion of his own.

There is much again that commands attention in the parallel, frequently drawn, between Raphael and the heroes of the Tuscan schools of his time, Lionardo, Fra Bartolommeo, and Michael Angelo; for though here and there something might be brought forward to modify his views and bring his thoughts into a different channel, his opinions might be maintained with very little further expansion or modification.

On one or two questions of moment, it may be necessary to express the belief that Grimm will not be precluded from the necessity of making concessions, and we may be deliberately compelled to assert that it is impossible for a

\* W. Scherer's *Ueber Raphael's Schule von Athen* (22 pages, Vienna, 1872) has an important complement to this volume of Grimm's commentaries.

student of Raphael to accept the assumption, ably though it be argued, that Raphael did not visit Florence before 1506.

No doubt it is proper and necessary to contest the accuracy of Vasari when he relates the causes of Raphael's first journey to Florence, and the manner in which he was led to make it; but it is quite another thing to deny that the journey took place. As early as the middle of the fifteenth century the most intimate connection existed between the painters of Perugia and those of Florence. There was not an artist of mark in the first who was not perfectly informed of the commissions entrusted to craftsmen of the second. There was no road better known than the road from Perugia to Florence, which had been frequently travelled by Domenico Veneziano and Fra Filippo Lippi. It had been hinted to Perugino on the very threshold of his career that Florence was the only city in which an artist could rise to fame; and he had been to Florence, where he caused his name to be respected. At the very time of which we are treating he had been induced to revisit the Tuscan capital, where Michael Angelo's "David" lay finished and waiting for a pedestal. Da Vinci, too, had returned to Florence from Milan, and had partially completed the noble cartoon which was copied at a later period by so many students. What more probable than that the causes which induced Perugino to leave Perugia should lead Raphael, his pupil, to quit Sienna?

Vasari says that, when Perugino went to Florence, Raphael left Perugia for Città di Castello, where he painted three pictures, including the Dudley "Crucifixion" and the "Sposalizio" of the Brera. He then proceeded to Sienna, and took service with Pinturicchio, for whom he executed certain drawings. His connection with Pinturicchio was broken off because he had heard of the completion of cartoons by Lionardo and Michael Angelo. It is quite as natural to suppose that Vasari was ill informed of the causes which led Raphael to Florence as it is to conceive that Raphael painted the pictures of Città di Castello at Perugia. We can easily prove that da Vinci's "Battle of Anghiari" was not finished till 1506; and Grimm gives good, though not absolutely convincing, reasons for concluding that Michael Angelo did not allow his cartoon to be seen till 1508. But putting this aside, there may have been reason enough for Raphael's desire to visit Florence, if we only suppose him cognisant of Perugino's presence there. He might have learnt from Perugino himself that Lionardo was composing his grand subject for the public palace; and he might expect facilities for seeing the masterpiece in its unfinished state from a man who was da Vinci's friend, and had been his companion in Verrocchio's shop. He had doubtless heard—as who had not?—of the commotion caused by the question how the "David" of Michael Angelo should be moved from its place in the sculptor's studio to where it was in future to be exhibited, for this was a question which had occupied the mind of every one in Florence; and it is notorious that it led to a general congress of artists in the early part of 1504. Why, then, should he not have gone to Florence?

Perugino was at Florence in 1504. He was there with slight interruptions till 1506. It was then that Lionardo gave up to him the commission which he had accepted from the brethren of the Santissima Annunziata de' Servi to complete the "Crucifixion" unfinished at the death of Filippino. Is there any reason to doubt that Raphael might have been in Florence in 1505, when we know that his predella of the "Madonna of Sant' Antonio" (1505) comprised an improved version of the very group of the Virgin and her succouring women which was introduced by Perugino into the "Crucifixion" of the Servi? But this is not all the evidence

which may be adduced to strengthen the belief that Raphael was at Florence in 1505.

It is an error of Grimm to suppose that Raphael furnished the designs for the frescoes executed by Pinturicchio and his assistants in the library at Sienna as early as 1502. There is testimony to prove that the ceiling of the library, in which Raphael had no share, was begun and completed by September of 1503; that the work was suspended on account of the death of Pius III., and resumed at the close of 1504. In 1504, no doubt, Raphael was with Pinturicchio at Sienna, for the names of both painters are connected with one of the most curious incidents which illustrated the public life of those days at Sienna. Julius II. had put Sienna under interdict, and Pandolfo Petrucci dared to deride the pope's authority. A chapel, recently founded in San Francesco of Sienna, had been completed at the expense of the Piccolomini; it was adorned with a Nativity by Pinturicchio, resting on a predella by Raphael. The time was the beginning of November, when all the wealthy citizens had left their summer residences and settled in town for the winter; but the churches were closed; the bells no longer called the faithful to prayer, and an Oriental stillness lay upon the streets and towers. Pandolfo ordered the canons of St. Francis to celebrate the mass at the altar of the Piccolomini; and, on their refusal, he drove the priests by force to the altar. It was probably after the memory of this incident had begun to fade from the minds of the Siennese that Raphael made for Pinturicchio the designs with which he now began to decorate the Piccolomini library. But then Raphael was free to go to Florence; and to Florence we may believe he went; for there is not a single picture of all those which he executed in 1505 which does not prove that he had seen the works of Masaccio, Lionardo, and Fra Bartolommeo.

It is quite in vain that Grimm denies this influence in the "Madonna" of Sant' Antonio, which is not, as he believes, at the Louvre, but in the National Gallery; and it is impossible to disagree with Waagen when he maintains that the free attitudes, the natural breadth of extremities, and the bold sweep of draperies in the foreground figures of St. Peter and St. Paul as conclusively reveal the lessons derived from Fra Bartolommeo as the female saints, Catharine and Rosalia, display the working upon Raphael of Lionardo's style.

Equally vain is the effort to deny the presence of Florentine elements in the wonderfully clear tones and admirably rounded flesh of the principal figures in the Ansdei "Madonna" at Blenheim.

Grimm says he cannot conceive how the "Madonna del Gran Duca" can be registered amongst the pieces which Raphael produced before the Ansdei "Madonna." We may not be able to understand how Grimm can be blind to the Florentine breadth and treatment in the fresco of San Severo; and there may be reasons which it is needless here to state why this splendid work should not be classed amongst Raphael's creations of 1505.

There are minor questions involved in the difference as to the true period of Raphael's first journey to Florence which Grimm naturally seeks to determine in his own favour; but here his endeavours are more of a negative than of a positive kind; and it is clear that, if he should be led to abandon his present theory respecting Raphael's movements from 1502 to 1506, he would have to alter these minor questions to some extent also. Whether he do this or not may be left to Grimm's choice. It is enough for the present purpose to have stated the grounds which exist for rejecting his theory.

One or two points more require but passing observation. Grimm accepts as a genuine Raphael the "Christ on the Mount" of the Maitland collection, which is now acknowledged to be by Spagna. He casually gives expression to



an opinion which is liable to be controverted, that the "Madonna" of Sant' Onofrio at Rome is by Lionardo da Vinci.

J. A. CROWE.

### ART NOTES.

The death of Théophile Gautier is a loss not only to Letters but to Art. For many years he contributed to the journals notices of the Salons, and a great variety of essays on artistic subjects. An article treating of his activity in this department is to appear shortly in the *Gazette des Beaux-Arts*. The *Chronique des Arts*, from which we quote, tells us that he was born at Tarbes, April 30, 1811. He came early to Paris, where he received his education in the Collège Charlemagne, after which he entered the atelier of M. Rioult, but, disgusted with the ill-success of his first attempts, he gave himself up to poetry, in which he achieved so brilliant a reputation.

M. Guédéonoff, the director of the Imperial Hermitage, has now printed the paper on the marble group attributed to Raphael, read by him on August 22 to the Academy of Sciences at St. Petersburg. The text is accompanied by two photographs, one from the work in question, the other from the plaster cast by Cavaceppi, existing at Dresden. The subject of the group is the well-known composition by Raphael of a Dead Child borne by a Dolphin (see *Academy*, vol. iii. p. 408). A repetition in marble, which was held for a long while to be the original work, was exhibited at Manchester in 1857, and pronounced by W. Bürger to be of no great beauty. This is smaller than the Dresden cast, and does not show signs of certain injuries which are proved by the cast to have existed in the original. It is not possible within the present limits to give full value to the facts and arguments which go to support the claim of the Hermitage example to priority and authenticity. Suffice it to say that it tallies exactly with the Dresden cast, which was formerly in the collection of Baron Mengs; that every probability is in favour of its having been the work restored and cast by Cavaceppi at Rome in 1768, when it was in the possession of M. de Breteuil; that between 1768 and 1779 it passed into the hands of a certain Mr. Browne (see Dallaway's *Anecdotes of the Arts in England*), who sold his collection of ancient marbles to an agent of the Empress Catherine II. It will be seen that there is a gap of 250 years to be filled up; that we are in nowise in a position to prove that the Hermitage example is the work which the Count Castiglione proposed to buy of Giulio Romano on May 8, 1523. Cavaceppi, in his catalogue of the works cast and restored by him, remarks of this group that it is by Lorenzotto, after a sketch by Raphael. It yet remains to be shown whether much or any credit should be attached to this hypothesis, or whether Raphael did much, or little, or nothing, towards the carrying out of his project.

We learn from the supplement to the *Zeitschrift für bildende Kunst* (October 25) that Signor Rosa's excavations in the Roman Forum have been crowned with the most brilliant success. About the beginning of September a portion of a Roman bas-relief was found at the corner where rises a middle-age tower. At two different portions of this tower (to which they appear to have served as supports hidden by other material) are now disclosed a row of portions of wall occupying from 12 to 15 metres, decked on both sides with costly sculptures, which have apparently served for the decoration of the rostrum. These marble reliefs would display to the eyes of the people standing below a historically arranged series of notable events having relation to the Forum. The position in which they have been found opens a fresh field to topographical conjecture and enquiry, whilst the reliefs are of the greatest importance, not only an account of their historical content, but on account of the brilliant quality of their execution, which appears to belong to the last bright epoch of Greek art in Rome. It is proposed to send the reliefs to the Vienna exhibition.

Amongst more recent publications in this department, the following appear to be worthy of special notice:—*La Colonne Trajane d'après le surmoulage exécuté à Rome* 61-62; this work will be complete in 120 parts, 12 of which have been

already published; the text is by M. Froehner, the conservator of the Louvre, and is embellished by numerous vignettes; the plates, 220 in number, are printed in colour from photographs executed by Gustave Arosa.—*Kunstmythologischer Atlas*, by Professor Overbeck; the atlas is to accompany the Professor's *Griechische Kunstmythologie*, of which the first volume, "Zeus," appeared last year; it possesses claims to attention rarely united, for it is not only valuable from a scientific but from an artistic point of view. A liberal subvention from the Saxon government has enabled the Professor to present his work to the public in its present form. The gigantic size of the plates (3 feet by 2 feet) will, we fear, stand very much in the way of frequent and convenient use.—*Rom und Mittel-Italien* (2 vols.), *Ober-Italien* (1 vol.), by Dr. Gsell-Fels. These are not mere handbooks, but the outcome of zealous and scientific research. They are amply illustrated with plans and maps, and every portion of the text bears traces of individual study.—*Trésors de l'Abbaye de Saint-Maurice d'Agagne*; both the text and illustrations are by M. Édouard Aubert. This Swiss monastery has preserved its treasures intact. M. de Blavignac published a few of the works of art which it contains in his *Histoire de l'Architecture sacrée dans les anciens évêchés de Genève, &c.* The present magnificent work is accompanied by an atlas of 45 plates, engravings or chromolithographs, which reproduce their originals with the greatest exactitude.—*I Pittori di Foligno nel secolo d'oro delle arti italiane*; it is sufficient to say that this book comes from the pen of Professor Adamo Rossi, the great authority on the Umbrian school.

In the *Allgemeine Zeitung* of November 6, under the title of "Der Maierhof und der Augsburger Rathsherr Philipp Hainhofer," will be found a very characteristic picture of the career of one of those artists who flourished from the end of the fifteenth up to the middle of the last century—artists who devoted their best energies to the designing of those objects which are best described by the expressive German word *Kleinkunst*. Hainhofer was born 1578 at Augsburg. There he settled and established his *Kunstammer*, which was visited by princes. Amongst his correspondents he counted Henri IV. and the Markgraf Friedrich of Baden. The Maierhof was a costly toy executed for Duke Philipp of Pomerania, on which worked joiners, goldsmiths, watchmakers, stonemasons, modellers, engravers, &c. The design was by Hainhofer, and was intended to depict the life of the nobles, military affairs, and peasant life. The quantity of small objects required to carry out this elaborate piece of child's play was enormous, and its completion occupied five years, at the end of which Hainhofer sets out with it himself to Stettin, accompanied by Baumgartner, who had executed the joiner's work required. At Stettin, Hainhofer, already a rich man, was loaded with gifts, was named "herzoglicher Rath," and dismissed with letters of recommendation to the Bishops of Würzburg and Bamberg. The author of this curious sketch, Franz Trautmann, cannot refrain from drawing attention to the resemblance with a difference which exists between the story of Hainhofer's journey to Stettin and Dürer's journey to the Netherlands. Dürer came home a loser, and for all his noble work got from the Governess Margaret nothing; but the wealthy Hainhofer with his vain toy kindles the delight of princes, and obtains riches and honours.

A. von Zahn concludes in the present number of the *Zeitschrift für bildende Kunst* his notice on Barock, Rococo, and Zopf. Dr. Kinkel reviews Dr. Gsell-Fels Handbooks for Italy. The number contains also a notice of the loan exhibition of ancient objects of industrial art now being held at Berlin, and a notice on the Vienna treasure chamber.

Very various articles are to be seen at the loan exhibition in Berlin mentioned above. The Crown Prince is said to have been active in getting together objects of interest; amongst many, all of which are worthy of notice, may be specially mentioned a fine Italian bronze bust of Sixtus V. which the Prince discovered in the picture gallery at Sanssouci. It is reported to be a masterpiece, and in its forcible expression of natural power forms a remarkable contrast to the delicate spiritualised head of Innocent X. which belongs to Prince Carl, and has been placed in the same room.

The collections in the museums of Paris are gradually assuming their wonted look. The MSS. have returned to the library of the Rue de Richelieu, the armour to the Museum of St.-Thomas d'Aquin, the precious goldsmith's work of the Musée des Souverains has found its way back to the glass-cases of Apollo Gallery. The bronze chair of Dagobert has been returned, together with the gold ornaments from the tomb of Tournay, to the Cabinet de Médailles. But the chalice of Saint-Remi, which was taken from the cabinet by means of a formal order of the Empress, has not been restored. The library since '96 has possessed this chalice without the library (says the *Chronique des Arts*); the chalice would have been melted at the Mint. The directors were careful, when forced to part with it, to make a memorandum in writing that they did so only as a loan: it is now the duty of the French government to see that the ecclesiastics of Rheims make a just restitution.

MM. Colnaghi and Co. have recently published a set of seven etchings by Mr. J. C. Robinson, the former director of the Art Department at South Kensington, whose forced retirement from a position in which his controlling knowledge was so much needed has been and still is so much regretted. Very few will be prepared to find what a high position as an artist must be assigned to the author of these seven plates. The subjects are very various; some of the Spanish ones are perhaps the most remarkable where all is good. "Space and Light" is simply one of the most brilliant things of the kind that has ever been done.

The "Kitchen Interior," by Pieter Aartsens, commonly called Lange Pier, was one of the pictures which attracted most attention at the recent exhibition organized at Amsterdam by the society *Arti et Amicitiae*. The proud force of this robust and magnificent master was a revelation to the foreign public. We learn that the Brussels Museum has had the good fortune to secure this fine specimen of his work.

The Society of Arts at Lyons will open its annual exhibition on the 10th January 1873, and will close it on or about the 15th March.

MM. Corot and Diaz have been named knights of the order of Leopold, on the occasion of the general Exhibition of the Fine Arts which has just taken place at Brussels.

### New Publications.

GUBERNATIS, Angelo de. *Zoological Mythology; or, The Legends of Animals.* 2 vols. Trübner.

GARRUCCI, R. *Storia dell' Arte cristiana nei primi otto secoli.* Venezia: Münster.

### Physical Science.

**A Treatise on the Theory of Friction.** By J. H. Jellett, B.D.; Senior Fellow of Trinity College, Dublin. Dublin: Hodges, Foster, and Co.

FOR the experimental determination of the laws of friction between solids, we are mainly indebted to Coulomb. The investigations, also, of M. Morin into the nature and action of this force are of great value. The laws established by them, although only approximations to the truth, have been adopted by mathematicians as the basis of the analytical treatment of the equilibrium and motion of particles and bodies on rough surfaces. The most important of these laws is that of the proportionality of the friction to the pressure. With reference to this law the author states in his preface that "the adoption of a more complicated law would have greatly enhanced the mathematical difficulties of the theory, yet without giving results mathematically coincident with facts." Undoubtedly a more complicated law would have immensely increased the mathematical difficulties, and would probably render any but the most

simple problems insoluble; but it is not clear that the results obtained would fail in coincidence with facts. The theory, however, has so far received but little attention; and the space allotted to its development in most treatises on Rational Mechanics (a designation of the mathematical science used by Mr. Jellett) is extremely limited in comparison with that devoted to the solution of mechanical problems on the supposition of perfect smoothness. The consequence has been to cause many students to look upon friction as a force which, to a certain extent, lies without the province of Rational Mechanics, but which has to be taken into consideration whenever it is required to apply results obtained on the supposition of smoothness to practical questions. This neglect, moreover, probably causes a large number of students to regard Rational Mechanics as a matter of pure analysis, and to lose sight of the physical truths which the formulae represent. The author wishes by this treatise to establish the theory of friction in its proper place as a branch of Rational Mechanics, and to obtain for it a more ample discussion than has yet been given it. The work, which well supports the reputation of its learned author as a mathematician, is one well calculated to effect this, both from its logical and scientific arrangement and from the thoroughness with which the theory has been worked out. The treatise is divided into eight chapters, which coincide with the principal divisions of the subject.

In chapter i. are discussed the general principles of the theory—such as the differences between moving and resisting forces, the nature and laws of the force of friction, the differences between statical and dynamical friction. The conception of the cone of resistance, which seems to be due to the late Canon Moseley, and of which considerable use is made throughout the treatise, is clearly stated, and directly deduced from the fundamental law of the proportionality of the friction to the pressure.

Chapters ii. and iii. are devoted to the analysis of the equilibrium of particles and bodies on rough surfaces. In these chapters the great importance of the cone of resistance is fully appreciated, and the light which its employment throws on the causes of the indeterminateness of problems involving friction, as well as on the limiting positions of equilibrium, is most perfect. In the several sections of these chapters numerous examples are worked out which cannot fail to be of great assistance in enabling the student to obtain complete mastery of the general propositions.

Chapters iv. and v. contain the analysis of the motion of particles and bodies on rough surfaces. Here the reader will immediately perceive the effect on the problem of one of the principal distinctions between statical and dynamical friction, viz. that whereas statical friction at any point of a body in contact with a rough surface is equal and opposite to the resultant of all the other forces acting on the body at that point, the dynamical is along the direction of motion of the point, but opposed to the motion, and its magnitude attains the maximum value—that of the pressure multiplied by the dynamical coefficient of friction.

Section 2 of chapter v. relates to the initial motion of a solid body resting on one or more surfaces; and in example 1 we come across the seeming paradox of the possibility of a motion of pure rolling of a cylinder placed with its axis horizontal on a rough vertical plane. For the explanation of this apparent paradox, the reader is referred to the book itself.

Chapter vi. relates to the distinction between possible and necessary equilibrium; and it is shown, by the consideration of the differences between statical and dynamical friction (one of which has just been mentioned, and the other is that the coefficient of the former is greater than that of the latter),



that there are certain positions of a system in which equilibrium *may* exist, and others in which it must exist. The formula which gives these positions is—

$$\sum (X\delta x + Y\delta y + Z\delta z) = 0 \text{ or } < 0,$$

where  $X, Y, Z$  represent the components of all the forces, external, geometrical, and frictional; the other letters and symbols have the ordinary signification. Now  $X, Y, Z$  may have such values for the position of rest as to satisfy this condition, whilst the friction is statical; whereas they may cease to satisfy it when the friction has become dynamical by a small motion given to the system. In this case the equilibrium is *possible*, but not *necessary*. If, however,  $X, Y, Z$  be such that this condition holds when the friction is dynamical, the position is one of *necessary* equilibrium; inasmuch as any small motion will cause the friction to take its dynamical value, for which the condition holds, and the motion will consequently be immediately destroyed. This chapter is certainly one of the most important, and at the same time the most interesting, in the book, from the clearness with which the differences between statical and dynamical friction are pointed out, and from the able manner in which the effects of these differences are developed.

Chapter vii. treats of the actual value of the acting force of friction, and of the cause of the indeterminateness of the mathematical solution, which lies in the abstraction introduced into the investigation. This abstraction Mr. Jellett considers to be the supposition of the perfect rigidity of the bodies and surfaces. The want of rigidity calls into action forces of elasticity, which produce slight oscillations, a discussion of which will lead to a completely determinate solution. This is illustrated by an example of a heavy body placed on a rough plane inclined to the horizon at an angle ( $\alpha$ ) greater than the angle of friction, and supported by a string. Only one equation can be obtained for the determination of the tension ( $T$ ) and the friction ( $F$ ), viz.  $T + F = Mg \sin \alpha$ . On taking into consideration, however, the slight extensibility of the string, and the small oscillations which the body will describe when its weight stretches the string, an equation is obtained for determining the tension, and, therefore, the friction can be fully determined.

In chapter viii. are discussed the interesting problems of the Top, Friction-wheels, and Locomotives.

The book is a really valuable addition to the literature of Rational Mechanics, and cannot fail to be of great service to the mathematical student. The general discussion of the force and its effects occupies a considerable space, and is so well developed as to be, to a great extent, available to those students who have not time or mathematical attainments sufficient to enable them to work through the whole of the mathematics. The book is most admirably printed, the diagrams are extremely well done, and the number of misprints observed were few and unimportant. W. J. LEWIS.

### Notes of Scientific Work.

#### Geology.

**On the Quaternary Formation in the Neighbourhood of Dresden.**—In a paper bearing the above title, and recently published at Halle, Dr. C. A. Jentsch discusses—(1) the extent of the sea during that epoch; (2) the diluvial hills; (3) the Dresden heath; (4) the siliceous deposits of the valley of the Elbe near Dresden; and (5) of the loess. After critically treating the more important of the many theories respecting the nature and origin of loess, the author propounds his own views on the origin of that of the Elbe valley. At one period the Elbe flowed high above its present course, excavating its river-bed gradually, and at the same time underwent lateral dislocations, chiefly due to its smaller tributaries. The river then moved towards the right side, partly, the author thinks, on account of the tributaries, partly on account of the loose sands forming its banks. As the river worked its

way through the sand on its right side, the Elbe formed siliceous deposits on its left bank, which lay nearly horizontal in consequence of the river having deepened its bed only very slowly. High floods then occurred as they do at the present time. It is probable, however, considering the different climate of the quaternary epoch, and more especially the influence of larger masses of ice, that they exerted a greater disturbing effect than they do now. These floods, extending far inland, swept into the river large quantities of the land-snails which inhabited its banks then; and the mud, containing numerous land Mollusca, was then deposited on the left banks of the Elbe. (6) Local formations: the marl of Cotta near Dresden, and the freshwater limestone of Robschütz in the Tribisch valley, near Meissen. (7) The fauna of these beds: in the freshwater limestone were found skulls of man, and bones of other portions of the human body, as well as rude pottery, proving the contemporary existence of man with *Elephas primigenius* and *Rhinoceros tichorhinus*, the remains of which abound. In addition to these, remains of the following Mammalia were discovered in the same deposit:—*Plecotus auritus*, *L.*, *Crocivura leucodon*, *Erinaceus europaeus*, *Mustela martes*, *Mus rattus*, *Sus scrofa*, *Equus Caballus*, *Cervus elaphus*, *C. capreolus*; of Birds, *Ciconia alba*, Bechst.; and of Reptilia, *Tropidonatus natrix* and *Bufo cinereus*; and a numerous and rich fauna of freshwater shells.

**Tin Ore in Australia.**—According to Mr. F. T. Gregory's report presented to the Geographical Society of London at the meeting held on the 6th November, the district in Queensland in which tin ore has been discovered is situated near the headwaters of the Severn river and its tributaries, and comprises an area of about 550 square miles. The district is an elevated granitic table-land intersected by ranges of hills rising abruptly, some attaining an elevation of about 3000 feet above the sea. The richest deposits are found in the beds of the streams or in alluvial flats on their banks; the aggregate length of these bands is estimated at about 170 miles. Numerous small stanniferous lodes have been discovered, but only two of much importance, one near Ballandean Head station on the Severn, and another in a reef of red granite rising in the midst of metamorphic slates and sandstones. The lodes run in parallel lines bearing about N. 50° E. The ore, cassiterite, is invariably associated with red granite, the felspar being a pink or red orthoclase, and the mica generally black; when crystals of tin ore are found *in situ*, however, the mica is white. The crystals of tin ore are generally found in or along the margins of quartz, threads, or veins in bands of loosely aggregated granitoid rock, but they are sometimes imbedded in the micaceous portions.—At the same meeting, G. H. F. Ulrich gave some description of the recent discoveries of tin ore in New England, New South Wales, a district almost immediately adjoining the tin region of Queensland. It forms a hilly elevated plateau, nearly 4000 feet above the sea-level. The predominant rocks are granite and basalt, enclosing subordinate areas of metamorphic slates and sandstones; the basalt generally forms the highest crests, and is spread in extensive masses over the country. The granite of the tin district is similar to the Queensland granite, but carries white orthoclase, and is transversed by quartz veins containing cassiterite in fine druses, seams, and scattered crystals, and by dykes of a softer granite, consisting chiefly of mica, and with scarcely any quartz, in which cassiterite is distributed in crystals, nests, and bunches, as well as in irregular veins several inches in thickness.

**On the Included Rock Fragments of the Cambridge Upper Greensand.**—The occurrence of numerous subangular fragments in the Upper Greensand formation was so far remarkable that it had already attracted the notice of Mr. Bonney and Mr. Seeley, who had both briefly hinted at the agency of ice. Unaware of the suggestions of these gentlemen, Mr. W. Johnson Sollas and Mr. A. J. Jukes-Browne, in a paper read at the meeting of the Geological Society on the 6th November, have expressed themselves in favour of this view. The infallible indications of Upper Greensand origin consisted of incrustations of *Plicatula sigillum*, *Ostrea vesiculosa*, and coprolites, without which the boulders would be undistinguishable from those of the overlying drift. The following generalisations were propounded:—1. The stones are mostly subangular; some consist of friable sandstones and shales, which could not have borne even a brief journey over the ocean-bed. 2. Many are of large size, especially when compared with the fine silt in which they were imbedded; the stones and silt could not have been borne along by the same marine current. 3. The stones have various lithological characters, and may be referred to granitic, schistose, volcanic, and sedimentary rocks, probably of Silurian, Old Red Sandstone, and Carboniferous age. Such strata are not found *in situ* in the neighbourhood, and the blocks must have come from Scotland and Wales. Numerous arguments were adduced in favour of their Scotch origin. The above considerations, that numerous rock fragments, some of which are very friable, have been brought from various localities, and yet retain their angularity, were thought sufficient evidence of their transportation by ice; the majority showed no ice scratches, but the small proportion of scratched stones in the moraine matter borne away on an iceberg and the small percentage of ice-scratched boulders in many deposits of glacial drift show that the absence of these striae is

not inconsistent with the glacial origin of the included fragments. The fauna, so far as it proved anything, suggested a cold climate; though abundant, the species were dwarfed, in striking contrast to those of the Greensand of southern England and the succeeding chalk. The authors concluded that a tongue of land separated the Upper Greensand sea into two basins, the northern of which received icebergs from the Scandinavian chain; the climate of this basin was cold, that of the southern basin being much warmer.

**Notice on the Balaenoids of the Vienna Basin.**—Up to the present time only five species of three genera have been found in the Tertiary basin of Vienna, and they have been derived partly from the marine, partly from the Sarmatian etage. These are: *Cetotherium priscum*, Eichw.; *C. ambiguum*, Brandt; *Cetotheriopsis linziana*, Brandt; *Pachyacanthus Suessii*, Brandt; *P. trachyspondylus*, Brandt. The genera *Cetotheriopsis* and *Pachyacanthus* are new. A paper by T. F. Brandt on this subject is printed in the *Sitzungsberichte der Akademie der Wissenschaften, Vienna*, p. 3.

**The Tertiary Basin of the Lower Rhine.**—The large Tertiary basin of the Lower Rhine consists of a central basin with a number of smaller inlets, which are known under the names of the Dürener, Bonner, Düsseldorf, and Siegburger bays. The deposits are chiefly sand and clay, with numerous lignite beds, all which yield a very abundant flora and fauna. The fauna, in addition to land animals and such as only live in freshwater basins, present an extraordinary number of insects which could only have lived in the forests and on the moors of the lignite period. They furnish a clear proof that during the Middle Oligocene period an extensive land and freshwater formation existed on the Lower Rhine, that had but a very slight elevation above the sea-level, and most probably resembled the present Haff or the swamps of Florida. As regards the flora, 247 species are described in all, of which 120 have been met with elsewhere. (Dr. A. Gurlt, *Uebersicht über das Tertiarbecken des Niederrheins*, Bonn.)

**The Miocene of North Germany.**—A. von Koenen describes in the first part of his paper on the Miocene fauna of North Germany, published in the *Schriften der Gesellschaft zur Beförderung der gesamten Naturwissenschaften zu Marburg*, the siphonostomic Gastropods, in all 142 species of the following genera:—*Murex*, 7; *Trophon*, 1; *Tiphys*, 2; *Tritonium*, 5; *Turbinella*, 2; *Cancellaria*, 15; *Pyrala*, 1; *Spirilla*, 1; *Ficula*, 2; *Fusus*, 18; *Stenomphalus*, 1; *Buccinopsis*, 1; *Terebra*, 7; *Eburna*, 1; *Nassa*, 12; *Phos*, 1; *Purpura*, 1; *Cassia*, 5; *Cassidaria*, 1; *Columbella*, 4; *Olivæ*, 1; *Ancillaria*, 2; *Conus*, 3; *Planorbis*, 26; *Defrancia*, 4; *Mangelia*, 8; *Borsonia*, 1; *Mitra*, 2; *Voluta*, 2; *Cypræa*, 3; *Erato*, 1; *Marginella*, 1.—The number of newly created species is 16.

**The Pliocene Formation of Tuscany.**—According to Antonio d'Acchiardi, the Pliocene formation of Tuscany consists of bluish clay, covered by fine sands, over which again lie coarse boulders. He believes the boulders, as well as the sands and the clay, to have been simultaneously deposited from the same ocean, though precipitated to different depths. (*Bollet. geolog.* 35.)

The last part of the *Jahrbuch für Mineralogie und Geologie* contains an interesting obituary notice of the well-known Alpine geologist, Arnold Escher von der Linth, who died recently at Zürich.

### Physiology.

**The Influence of the Length of a Nerve traversed by a Current of Electricity upon its Excitation.**—V. Willy, in a paper published in *Pflüger's Archiv*, states that it is generally allowed that the degree of excitation of a nerve, measured by the extent of contraction of the muscle to which it is distributed, augments with the length of the segment of the nerve through which the current is transmitted after this is closed or before it is opened. According to the author's latest researches, however, this only holds good for the descending current through the nerve, whilst the converse obtains for the ascending current. He arrived at this result by two ways: first, by ascertaining the strength of current, which, when passed through various lengths of the extrapolar portion of the nerve, induced a minimum contraction; and, secondly, by determining the amount of contraction produced by equal excitations passed through extrapolar segments of nerve of various lengths.

**The Metamorphosis of Tissue under the Influence of Morphia, Quinine, and Arsenic.**—H. v. Boeck has published in the *Zeitschrift für Biologie* (vol. vii. part iv.) the results of his investigations of the action of the above-mentioned substances on a dog. The animal chosen for the purpose weighed 54 lbs., and during the experiment was daily fed with 500 grammes of good meat, containing 17 grammes of nitrogen and 150 grammes of fat, and 150 c.c. of water. In the first experiment morphia was used, and it was found that, when the excretion of nitrogen had remained unaltered for five days, the addition to the food of 1·5 grains of morphia per diem during those days caused a reduction in the amount of nitrogen to the extent of more than 10 grains (0·7 gramme) in that period. The second experiment was

made with quinine, and to the above-mentioned quantity of food one gramme (15·44 grains) of quinine was added per diem during three days, when it was found by daily analysis of the excreta that as much as 11·6 grammes (179 grains) less of nitrogen were excreted in eight days. This represented a certain though slight quantity of food and tissue spared by the use of the drug. The third experiment was with arsenic, of which altogether 2·5 grains were given in doses divided over three days. The results of analysis of the excreta again showed that only an inconsiderable amount of food and tissue were spared by the addition of this substance to the food.

**On Endogenous Cell Formation.**—The question of the endogenous formation of cells, says Professor Bizzozero, in a paper contributed to *Stricker's Jahrbücher* (part ii.), cannot be regarded as finally decided. Buhl thought he had set the matter at rest by his discovery of nucleated cell-containing cells in the exsudate of croupous pneumonia, but Steudener and Volkmann have thrown a doubt upon Buhl's observations, by showing that some cells can be enveloped or invested by others by a kind of invagination process, and consequently that the presence of cells in the interior of others is not conclusive evidence that they were developed in that position. More recently Oser, from his examination of the fluid discharged in artificially produced purulent ophthalmia, has again given support to the doctrine of endogenous cell formation. Bizzozero has recently investigated the cells which accumulate in the anterior chamber of the eye under various morbid conditions, and which frequently contain cells in their interior. Many of the cells are large, irregularly rounded, and contain numerous fat cells in their substance, a nucleus, and several pus corpuscles. The latter, he considers, have been absorbed, and not produced in the position they occupy, for if that were their origin, they should be met with in all stages of development, which is not the case. Moreover, they should occur from the very commencement of the suppuration process, and this is not in accordance with observation, as they are only found when the pus has been for some days in the anterior chamber, and the cells have already lost their contractility. Then, again, blood-corpuscles are not unfrequently found in the large cells, as well as those of pus. Bizzozero has made a series of experiments on animals that support the following conclusions at which he had arrived from his observations on man: 1. That the pus corpuscles in the large cells have the aspect of old and degenerating elements. 2. That the cell-containing cells never appear in the early stages of the inflammation; and 3. That in suppurative inflammation of the anterior chamber of the eye large cell-elements are formed, which, owing to the contractility of their protoplasm, have the power of taking up the surrounding cells. He believes that these large elements proceed from an hypertrophy of the pus-cells, since intermediate forms can be seen, and, according to all observation, the epithelium of the membrane of Descemet does not participate in their formation. What becomes of the large cells after they have ingested all the white and red corpuscles and smaller pus-cells, he has not been able to ascertain.

**The Action of Strychnia on the Vaso-Motor System.**—In the second part of *Stricker's Medizinische Jahrbücher*, which has just appeared, S. Mayer, of Prague, gives the results of his investigations on the influence of strychnia on the vaso-motor system. He remarks that, though numerous researches have been devoted to the action of this poison, comparatively little is yet known respecting it, through the attention of observers having been exclusively given to its singular power of producing tetanic contraction of the vaso-motor system. Mayer's experiments were conducted on rabbits and dogs by means of an ordinary kymographion. The animals were injected with a solution of nitrate of strychnia in water (the solution containing 0·0008 of a grain in 1 c.c. of water), and being introduced into the jugular or crural vein. In one set of experiments the dogs were stupefied by opium, and artificial respiration was maintained through a canula introduced into the trachea. The manometer giving the tracings was connected with the carotid artery. A plate showing the tracings obtained in this and other cases accompanies the paper. About thirty seconds after the injection of 2 c.c. of the solution the arterial blood pressure was found to undergo an extraordinary increase with a simultaneous great increase in the frequency of the pulse. At the same time the voluntary muscular system became tetanised, the chest being maintained for a long period in a state of maximum inspiration. The great augmentation in the blood pressure was clearly due in part to the well-known mechanical action of the tetanised muscles on the current of venous blood, and partly to the obstacle which such contracted muscles present to the entrance of blood from the arterial side. Other accessory circumstances tending to the same result were the dilatation of the thorax and the accumulation of carbonic acid or the deficiency of oxygen in the blood, which last has been demonstrated to act as a stimulant upon the centres of innervation of the heart and blood-vessels. To eliminate some of these disturbing elements, some animals were subjected to the action of woocara before the injection of strychnia. By this means the effects of the muscular contraction were removed while the respiratory movements were not interfered with. Great elevation of the blood pressure was still observed however; the



number of the cardiac pulsations was not altered. Mayer concludes, then, that the increase in blood pressure following the injection of strychnia into the blood is essentially due to an extraordinarily intense excitation of the vaso-motor centres in the brain, and upon the resulting contraction induced in the small arteries. This view is supported by an examination of the intestines, which become exceedingly pale, as well as by the effects of section of the spiral cord, which severs the vaso-motor nerve, when all increase of blood pressure ceases.

**A Certain Sign of Death.**—Dr. Hugo Magnus, Assistant Physician to the Hospital at Breslau, suggests, as the best means of determining the presence of lingering traces of life, that a tight ligature be tied round one of the fingers. If life be not extinct, the part beyond the ligature soon becomes red, the depth of the colour increasing to dark red and violet. Just above the ligature the skin remains white. The explanation is sufficiently simple: the ligature prevents the return of venous blood from the part; but the arteries, being deeper seated and more protected, still continue to convey blood to the capillaries. The part of the finger beyond the ligature consequently becomes engorged. This test is of value because it can be applied without difficulty, and has the advantage of being the more available the sooner it is tried after actual death.

**The Process of Coagulation.**—The last part of *Pfiffer's Archiv* (vol. vi. parts 8 and 9) is almost wholly taken up with a long paper by Alexander Schmidt, of Dorpat, on the coagulation of fibrin. He discusses successively the mode of obtaining and the characters of the fibrinoplastic substance or paraglobulin, and meets the objections raised by Brücke to its separate existence. It can be thrown down from its saturated alkaline solution by exact neutralisation with acetic acid, provided there is no other neutral alkaline salt present. It can also be precipitated by carbonic acid gas from the diluted serum of blood, chyle, lymph, and pus. It is insoluble in water, but highly soluble in neutral alkaline salts, and in very dilute acids and alkalies. The so-called fibrinogen substance he obtains from the fluids of the serous cavities by diluting them with several times their volume of water, and precipitating with acetic acid. The presence of these two substances—the fibrinogen and the fibrinoplastic substance—is a primary condition for coagulation, but in addition there must be, he maintains, a *third substance*, a ferment. This in the living body is not contained, either in the plasma or in the blood corpuscles, but first appears after the withdrawal of the blood from the body. It is not clear whether it is generated in the white corpuscles or in the plasma, but it is certain that it is not produced in the red corpuscles.

### Botany.

Dr. Pfeiffer has issued a volume of a *Nomenclator botanica*, which will contain in alphabetical order all the collective names, from sections to classes inclusive, which have been employed in systematic botany from the time of Linnaeus up to 1858, the date to which Dr. Pfeiffer brought his already published *Synonymia botanica*. The present work will really form a skeleton encyclopaedia of systematic botany. Each article will commence with the etymology of the name and the original authority for it, to be followed in chronological sequence by the different views that have been taken of its systematic position, including references to the works of all systematists by whom each particular view has been adopted. The articles will therefore be complete historical digests, the utility of which can only be estimated by those who have had occasion to prepare anything of the kind in connection with their own studies. The present work, when completed, will take its place beside such books as Steudel's *Nomenclator*, Pritzl's *Index Iconum* and *Thesaurus*, Walpers' *Repertorium* and *Annales*, as another of those indispensable aids to study which the laborious students of Germany have given to the botanical world. An especially important feature of the new work is that it includes Cryptogamic as well as Phanerogamic plants. No general view of the genera of the former exists later than that given by Endlicher eighteen years before, and it is often troublesome in consequence to run down a name in this branch of botany. Dr. Pfeiffer reasonably remarks that it was necessary to place some limit to his labours, and if one which is now fourteen years distant seems needlessly remote, he meets the objection by saying that he did not anticipate that it would have required so long a period of time to accomplish his task. It can hardly be doubted that, when the scientific history of our own day comes under review, the value of labours like those of Dr. Pfeiffer, in their influence on the progress of knowledge, will be estimated hardly, if at all, lower than that of actual scientific discovery.

**Mimicry in Fungi.**—In the *Gardener's Chronicle* for November 16, Mr. Worthington Smith records some very curious instances of "mimetic resemblances" among Fungi. *Agaricus atratus* is a very common and *Cantharellus carbonarius* a very uncommon fungus; the latter is always found in company with the former; and they are so exactly alike externally that it is impossible to distinguish them without gathering them and examining the gills. *Agaricus fascicularis* is one of our commonest fungi; two rare species have lately been added to

our flora, *Agaricus alnicola* and *Agaricus conissans*; they invariably grow with the former, and exactly mimic it in both habit and colour, although belonging to quite different subgenera with different-coloured gills and spores. *Agaricus carbonarius* and *Agaricus spumosus* have been found growing together, and so similar that it is impossible for the sharpest eye to distinguish one from the other without examination. One of our very commonest fungi is *Agaricus epipterygius*; quite lately, in the midst of a bundle of this species, Mr. Smith found single specimens of *Hygrophorus meiseriensis*, a species new to this country, and so exactly resembling its commoner brother in slender stem, moist pileus, and peculiar colouring, as to be certain to escape detection unless minutely and carefully examined. These four instances of rare species of fungus possessing the exact habits and colours of very common species might easily be multiplied in number. The only benefit or "protection" which Mr. Smith can suggest to have accrued from this "mimicry" is that in consequence of it the rarer species have hitherto escaped detection and extermination by fungus-collectors!

**Development of the Flower of the Hazel.**—At the recent meeting at Bordeaux of the French Association for the Advancement of Science, M. Baillon, president of the Linnaean Society of France, read a paper containing some very curious observations on the development of the flower of the common hazel (*Corylus avellana*). At the time when the female flowers are generally considered to be expanded (in the neighbourhood of Paris, as of London, towards the end of January), they consist of nothing but a pair of long styles, crimson and stigmatic at their extremity, united at their base to a small extent in a mass which contains neither ovarian cavity nor ovules. These female flowers are to be first detected about the month of May or June, their development proceeding gradually until it reaches the stage described above about the following January. It is only after this period, which is considered that of flowering, that the depression which exists in the interior of the styles becomes developed into a pit more or less deep, representing a single ovarian cell. Still later, about the month of April, two placenta appear on the walls of this cavity, and in the interval of the branching styles, under the form of vertical slightly prominent bands. Soon the lower portion of these bands, larger and thicker, is divided by a vertical furrow into two lobes, each representing an ovule. The ovary of the hazel is at this time unilocular and quadriovular; but soon, at the same time that the two placenta become more prominent, the development of one or two, rarely three, ovules becomes arrested. The ovules, when they arrive at their full development, have become descending, with the micropyle directed upwards and outwards. By what means they are fertilised by the pollen from the male catkins, which fall in January or February, remains a mystery.

The *Nachrichten* of the Göttingen *Gesellschaft der Wissenschaften*, No. 24, contain a paper by Dr. A. Stern on a hitherto unnoticed letter of Spinoza, and the correspondence of Spinoza and Oldenburg in 1665. In v. Vloten's supplement there is a newly discovered letter of Oldenburg, the answer to which is missing. Dr. Stern thinks he has found a fragment of the latter in Robert Boyle's *Works*, vol. v. p. 339 (Lond. 1744, fol.).

### FATHER SECCHI ON SOLAR DISCOVERIES.

#### TO THE EDITOR OF THE ACADEMY.

October 29, 1872.

SIR,—I regret that absence from London has prevented my replying to Father Secchi's letter earlier.

You will be able to inform him that you did not ask me to review the German edition of his book; and I hope that he will measure the regret which I felt in making the strictures I felt myself in duty bound to make by the unwillingness I showed—of which you can assure him—in undertaking the review. Having said this, I may add that I have just risen from a hasty glance at the German edition of which mention has been made, and I am rejoiced to acknowledge that in my opinion it breathes quite a different spirit from the earlier French one; so much so that, if we are not dealing with the work of the German editor, I am certain many scientific men in many lands will hail it as an indication that Father Secchi will probably do them justice in future; that he has not done justice in the past is an opinion I share with every man of science with whom I have spoken on the subject, including many of his own countrymen.

This being so, I do not feel it necessary to enter so freely into a discussion of the points raised as I otherwise should have done. I must however say a few words.

1. With reference to the work of the Kew observers in connection with planetary action, the memoirs referred to by Father Secchi were preceded by one dating as far back as 1863, communicated by Dr. Balfour Stewart to the British Association in that year.

2. Father Secchi does not deny the work of Henry and Rutherford (the difference between A's and B's types of stars is not in question); and if that work existed, I hold—and this is all I said—it should have been referred to when subsequent similar work was considered at length.

3. If the two propositions concerning the cause of the formation of solar spots do not exclude one another, why does Father Secchi say that one idea is more probable than the other?

4. With regard to the gases in the interior of the sun, the question of their transparency is not raised, nor shall I raise it now. What I said was, in other words, that Father Secchi seemed to base his proof of what would amount to an *absorption* in a *radiating* gas on the *absorption* of an *absorbing* gas such as the earth's cool atmosphere (p. 106).

J. NORMAN LOCKYER.

### New Publications.

BOSI, L. Lezioni di Patologia e Chimica medica. Pisa.

BRUNETTI, L. Due Casi di Trasposizione laterale completa di tutti i Visceri dell' Uomo. Padova.

CHAPMAN, H. C. Evolution of Life. Philadelphia.

COHN, F. Beiträge zur Biologie der Pflanzen. 2. Heft. Breslau: Kern.

DUB, J. Die Anwendung des Electromagnetismus, mit besonderer Berücksichtigung der neueren Telegraphie. 2. Aufl. 1. Lief. Berlin: Springer.

EDWARDS, W. H. The Butterflies of North America. Part 10. Philadelphia.

FORNARA, D. Studi sperimentali sopra l'azione dell' Upasantiar e del Veleno del Mospo, fatti nel Museo zoologico della R. Università di Bologna. Genova: Sordo-muti.

HALLOWELL, B. Geometrical Analysis. Philadelphia.

KOCH, F. E., und WIECHMANN, C. M. Die Mollusken-Fauna des Sternberger Gesteins in Mecklenburg. Neubrandenburg: Brunsow.

KÖTTERITZSCH, T. Lehrbuch der Electrostatik. Leipzig: Teubner.

MISSION SCIENTIFIQUE au Mexique et dans l'Amérique centrale. Recherches botaniques publiées sous la direction de J. Decaisne. 1<sup>re</sup> partie: Cryptogamie. Par E. Fournier. Paris.

PÉRARD, A. Catalogue raisonné des Plantes croissantes naturellement ou soumises à la grande culture dans l'arrondissement de Montluçon. Paris: Savy.

RITZMANN, E. Beiträge zur Aetiologie und Pathologie der Erysipels. Schaffhausen: Schoch.

SCHIERING, J. E. Werke von C. F. Gauss. Bd. VII. (Theoria motus corporum coelestium in sectionibus conicis solem ambientium.) Gotha: Perthes.

SOLBRIG, A. Ueber die feinere Structur der Nervenlemente bei den Gasteropoden. Leipzig: Engelmann.

### History.

**The Tradition of the Syriac Church of Antioch concerning the Primacy and the Prerogatives of St. Peter, and of his Successors, the Roman Pontiffs.** By the Most Rev. Cyril Behnam Benni, Syriac Archbishop of Mossul. Translated under the Direction of the Author by the Rev. Joseph Gagliardi. Burns, Oates, and Co.

ARCHBISHOP BENNI, a Syrian prelate, who took part in the Vatican Council, has published a collection of extracts from Eastern (chiefly Syriac) documents in behalf of papal authority. His readers are expected to look upon these extracts as exhibiting the primitive tradition of the East, as shown "by a diligent enquiry into the teaching of *its great writers*, who faithfully handed on to their successors those inviolable truths which they had received from their forefathers, in whose ears was still ringing the voice of the Apostles," &c.

If the book were intended for the learned, Archbishop Benni's preface might easily awaken the suspicion of being ironically written, for it is impossible, in fact, to display the nakedness of the land to intelligent eyes more completely than is done by this collection of extracts. But the majority of its readers must necessarily be incompetent critics of the evidence put before them, and if we may judge of them by the list of subscribers, they will have but little hesitation in concluding that the Eastern Church has always taught the dogmas lately defined in the Vatican Council.

The book consists of 228 extracts, of which the first 103

(constituting the most considerable portion of the work, and philologically the most interesting) have reference to St. Peter. The second part (extracts 104-127) is on "the Roman Church," and the third (extracts 128-228) on "the Roman Pontiffs, the successors of St. Peter." The last document of the first part is in Latin, and was printed in Rome. The other documents of this part are in general rhetorical or poetical extracts in honour of St. Peter, but contain nothing whatever favouring doctrine peculiar to Rome. And the compiler would have no difficulty in drawing up similar collections of texts in honour of St. Paul, St. James, or St. John.

The rest of the work is more important for the compiler's purpose. But even here a very large number of the texts quoted are quite irrelevant. Whole chapters, such as that on excommunication, are simply superfluous. No one ever denied that the bishops of Rome, like all other bishops, might lawfully refuse their communion to individuals or churches. The important thing to be proved is that individuals or churches out of communion with Rome are out of the pale of the Catholic Church. Many texts have no reference, direct or indirect, to Rome, but it is modestly assumed that whatever authority the Easterns attribute to their patriarch is a reminiscence of "the authority which by Divine Right was conferred to the Roman Pontiffs." The liturgical evidence is exceedingly meagre. The extracts from the "Syrian Liturgy" do not extend further than extract 108; those from the "Syro Chaldaean" stop at 112; three extracts from the "Syro-Maronite" (119, 123, and 124) are certainly not ancient. Of the extracts from the "Syriac fathers" (or rather fathers whose writings are preserved in Syriac) all but three belong to part i. Of the remaining three, one is the corrupt form of a well-known passage of St. Ignatius, who is erroneously imagined (p. 84 note) to have written in Syriac; another (109), attributed to St. James of Sarug, is acknowledged to be apocryphal; and a third (154), attributed to St. Athanasius, is a notorious forgery. The documents attributed to the Council of Nice are also well-known forgeries. The reference (174), stating that to the Roman bishop "the pontifical power over the whole world has been given as it has been defined in a canon of the Constantinopolitan Council," is a ludicrous misrepresentation of a canon which the popes have always execrated. The references to Sardica, Ephesus, and Chalcedon, are familiar to us from Latin and Greek sources, and (in Syriac at least) add nothing to the information we already possess. I must, however, warn English readers against the translation of extract 176, quoted from the Council of Ephesus to show that popes "are above Councils." The Council is made to say that it came to its decisions "unavoidably compelled by the canons, and by the letters of our most holy Father, and co-minister, Celestine, Bishop of the Roman Church." The Greek original has been the verb *ἀναγκάζειν*, which, as every decent scholar knows, does not imply the least kind of authority or superiority. Any one, however inferior his position, who proves his point constrains (*ἀναγκάζει*) the person he convinces. Now the

word *ἵνα* in the Syriac version exactly corresponds to the Greek. It need mean nothing more than "rationibus movere." An excellent example of this use of the word will be found in Ebedjesu's *Nomocanon*, tract. vii. c. 6, where a patriarch says he is *forced* to grant an exemption to a monastery; the only compulsion being that the reasons for so doing are satisfactory.

The chief strength of the book with reference to unlearned readers lies in those extracts which have not the least particle of claim to represent Eastern tradition. The



strong passages, without a single exception, represent not Eastern, but Roman, tradition.

Moses of Mardin, for instance, is quoted (211) as offering Pope Julius III. a profession of faith in his own name and in that of his patriarch. But the important passage following this extract is not quoted. Moses proceeds to say that hitherto he had made no profession, because his patriarch had charged him not to be overhasty, "*donec ipsam professionem probe assequutus essem*," that is, until he had well learnt his lesson in Rome. "And now I perceive," he adds, "that *your* profession" (he is speaking to the cardinals) "is like a light placed on a candlestick," &c., as in text 217, quoted in proof of "Their inerrancy." This is the profession made at Rome by a *convert*. And Assemani, from whom Archbishop Benni has borrowed his extracts, adds—"Haec ille; *cujus tamen fidem Ignatius ejusdem Patriarcha nequaquam ratam habuit, ut postmodum compertum est.*"

The earliest and most sincere Eastern converts to Rome were the Maronites. They were formerly Monothelites, and are said to have had a devotion to Pope Honorius. William of Tyre in his history (lib. 22, c. 8) calls Maro a haeresiarch, and, when speaking of the union with Rome, says—"Abjurato errore quo diu periculose nimis detenti fuerant, ad unitatem Ecclesiae Catholicae reversi sunt, fidem orthodoxam suscipientes, parati *Romanae ecclesiae traditiones cum omni veneratione amplecti et observare.*" This is to be borne in mind when reading text 134, and the like. Nor is it to be forgotten even when reading Nestorian or Monophysite writers. Archbishop Benni repeatedly quotes Benattibus, a Nestorian canonist. But the writings of Benattibus have been extensively corrupted. And Assemani (*B. O.* tom. iii. part i. p. 545) expressly says that, just as the Jacobites had altered the text of Benattibus, "ita Maronitae crediderim quaedam addidisse vel detraxisse, quae ad suam religionem confirmandam facerent."

What I have said of Moses of Mardin holds good with reference to Raban Ara (138) (who was a mere monk, not a Catholicus or Primas), to the Jacobite bishops who wrote to Innocent IV., and to certain Chaldaean prelates. In the middle of the sixteenth century, Sulāka, one of the claimants of the Nestorian patriarchate, came to Rome, abjured his Eastern doctrines, and, professing unconditional obedience to the pope, was consecrated under the name of John. The present views of Archbishop Manning might with equal justice be quoted as evidence of the traditional doctrine of the Church of England.

On one point connected with these Chaldaean prelates it is necessary to say a few words. Archbishop Benni has quoted Elias of Babylon (199) as saying—

"Even [the Metropolitan of] our See of Babylon was not elected by itself, as those of other heretics who have lawlessly multiplied Patriarchs in the world without the permission of the see of the great Church of Rome: but it was by the command of the Pope, and by an order of the Roman Church, that the see of Babylon was filled up. Thus much is to be found written in our Annals, and thus it is that we have before received [our] power up to this day."

Here is a positive historical statement which would be most important if it were true. But it is notoriously untrue. It is either a wilful falsehood or an incredibly ignorant blunder. Not once or twice, but over and over again, as Archbishop Benni cannot but be aware, has the honest and learned Joseph Assemani indignantly protested against this delusion, as an invention of the partisans of Sulāka under the stress of controversy with their own countrymen. The pope had created an Eastern patriarch. The Nestorians said, and with perfect truth, that such a thing had never been heard of. The adherents of Sulāka talk about their annals, but they had none in reality, except those which they possessed in common with their Nestorian opponents. And the only

way in which they can be defended from the charge of deliberate falsehood is to suppose that they mistook Antioch, as being in the Roman empire, for Rome.

By far the strongest extracts (and the most numerous) are taken from Joseph II., bishop of Amida, afterwards Chaldaean patriarch. He certainly was a very remarkable man. He has left an interesting autobiographical sketch. In his pursuit of knowledge under difficulties he even attended Mohammedan schools, and read so many bad books that he considers it a divine mercy that hell had not yet overtaken him. But in this unhealthy literature he unfortunately did not reckon the Pseudo-Isidorian decretals, which he quotes twice (126, 154) in the extracts selected from him by Archbishop Benni. Are these decretals part of the primitive tradition of Antioch? Is not the mere fact of believing in them a proof that we have here to do with the corrupt traditions of the West?

The language of adulation, when addressed to a pope, is naturally expressive of orthodox ultramontane doctrine. "When you speak," says the author of a certain dedication, "men crowd to listen with that awful reverence as to holy oracles or divine prophecies." The person so addressed was Nell Gwynne, but it would not be difficult to quote similar language addressed by one Eastern ecclesiastic to another. And if it were addressed to the bishop of Rome, the author would naturally speak of St. Peter in the style common to Christians of all Eastern and Western churches, and all this, "with continual adorations, perpetual bowings, and sempiternal kneelings before the holy feet" (I am quoting Elias of Babylon), would produce exactly the kind of evidence suited for Archbishop Benni's book. Now this kind of testimony is what no Eastern ecclesiastic who wanted the pope's help would hesitate about for a moment. In his mouth it would mean no more than "I am, Sir, your most obedient servant." It is the bait which Orientals have repeatedly tried, and sometimes with success, to impose upon Rome, even when they were doggedly resolved to make no real concession. Archbishop Benni is aware of these attempts, for he avoids quoting certain testimonies which would have suited him admirably, had not the exposure of the fraud been close at hand. But he has not always been successful in avoiding cases of this kind. Assemani and Lequien consider the testimonies of 1247 as fraudulent as those of 1223; and Archbishop Benni is silent about the latter because Raynaldus has shown their insincerity, but he produces the former because Raynaldus was imposed upon by them as the Dominicans had been before him. But perhaps the most notorious fraud ever practised upon Rome was perpetrated in the name of Gabriel, who is introduced to us as "the 97th successor of the Evangelist St. Mark," and is quoted oftener than St. Ephrem—I need hardly say, in support of doctrines for which St. Ephrem might be searched in vain.

What has this Gabriel to do with the tradition of the Syriac Church? He was an Egyptian Monophysite by whom (or in whose name) Rome was most shamelessly deceived. The whole embassy described by Baronius in the appendix to his sixth volume was an impudent imposture, as is admitted by Roman Catholic as well as by Protestant writers. The Carmelite Thomas a Jesu is not less strong in his expressions than the Protestant Geddes. Renaudot and the Bollandist Sollier allow that nothing came out of the whole business. And, quite recently, a letter written by a contemporary, and to some extent an eye-witness, the famous Cyril Lucaris, Melchite patriarch of Alexandria, has been published, in which he speaks of—

"*illam illusionem, potiusquam legationem, cum revera impostura fuerat cujusdam Coptae vel Eutythiani qui se Romam profectus Alexandrini*

patriarchae legatum falso professus fuerit. . . . At creato Paulo fraudeque detecta, ille bonus legatus Roma clam ejectus, ne forsan palam fieret comœdia, huc in Aegyptum se retulerat."

I have said that the chief strength of Archbishop Benni's book lies in those extracts which really represent Roman, and not Eastern, tradition. These are mixed up with others, and the unlearned reader is left under an impression that all the writers give more or less the same testimony, which is, indeed, very far from being the case. But if all the Roman witnesses were cut out, I should still refuse to accept Archbishop Benni's representation of the Eastern tradition, even as regards the patriarchal authority. In the first place, he has only given those extracts which describe one stage, and a very modern one, of the Nestorian patriarchate. He wishes to represent it as absolute, and therefore does not scruple to omit qualifying clauses of the utmost importance. He quotes, for instance (160), a synod forbidding metropolitans and bishops "to violate any order, command, or decision of the Patriarch," &c., but he leaves out the important addition, "when he commands according to the will of Christ." According to theories now in vogue, the will of Christ is inferred from the absolute nature of the authority which commands. But it was not always so, even in the Roman Church. I am, however, quite willing to grant that absolutist ideas were dominant (on paper at least) at the time that Ebedjesu wrote his *Nomocanon*. But these ideas were not primitive, any more than the tendencies in behalf of hereditary succession in the patriarchate. The *Nomocanon* itself bears witness to this. Under the head, "They are above Councils," we are treated to extracts from the Synod of Dadishû, which say that "Bishops cannot summon any Synod against their Head and leader," that he is to judge his inferiors, but that "his own judgment is to be reserved to Christ." But every reader of the *Bibliotheca Orientalis* knows that the supposed Synod of Dadishû is a forgery, and every reader of the *Nomocanon* of Ebedjesu knows that provision is made in the canons for the synodical judgment and deposition of the patriarch for heresy or other misconduct (see tract. viii. c. 20, can. 4 and 5, also c. 21). More than one patriarch has, in fact, been synodically deposed. Even the forged letter of the "Occidentals" given in the ninth part of the *Nomocanon* reserves the judgment of the patriarch to the other patriarchs, or to the sovereign. It is easy to understand why Archbishop Benni passes over all this in silence.

If we exclude the irrelevant evidence, and that which is manifestly purely Roman, there still remains that of the spurious Arabic canons attributed to the Council of Nice. The importance of these has been much exaggerated in consequence of their being accepted by the different Eastern communions. From the hostile feeling which keeps these communions apart, it has been argued that none of them would borrow from another, and that what is common to them all must be anterior to the schism. But *à priori* arguments like this require to be very rigorously verified. It was on exactly similar grounds that the Samaritan recension of the Pentateuch was formerly supposed (but most erroneously, as every scholar is now aware) to be of the utmost antiquity and purity. These Arabic canons contain gross anachronisms which prove them to be of much more recent date than the beginning of the schism. The hostile feeling referred to has not, in fact, been of a nature to prevent borrowings, especially of forgeries bearing names which did not awaken sectarian animosity. Nor has it been as persistent as is commonly thought. The Moslem invasion was productive of pacific and even kindly intercourse, sometimes closely approaching to religious intercommunion, between the separated churches, and great writers like Elias

of Damascus on the Nestorian and Barhebraeus on the Jacobite side wrote treatises to prove that the great Eastern communities were equally orthodox in fact, that their differences were verbal, and that party spirit alone kept them asunder. There are repeated instances on record (see Lacroze, *Histoire du Christianisme des Indes*, tom. ii. p. 115) of Nestorians applying to Jacobites for bishops; the identity of *rite* being considered by them as of greater importance than the difference of dogmatic formula. And as for borrowing of literary forgeries, there is the well-known case of the Jacobites adopting the Nestorian fable of the transfer of the patriarchal dignity to the see of Seleucia. There is nothing in the Arabic canons on the dignity of the Roman see to shock either Nestorians or Jacobites, because they all consider that see as having disappeared from the Church many centuries ago. The canons therefore merely represent to them fragments of ecclesiastical discipline which have long since become obsolete. We have at present no means of determining the date of this forgery. The manuscripts which contain the canons are not of very great antiquity. The earliest writer who can be referred to as recognising their existence is Elias of Damascus; but no sensible person will accept such a reference as extract 156 as a proof that they existed at the time of this writer. A collection of canons admits of an indefinite amount of increase, for which the author whose name it bears is in no way responsible. A very large number of the MSS. of Dionysius Exiguus contain documents which he certainly had not included in his collection. We require, then, to see the collection of Elias of Damascus as a whole, and to know its literary history as we know that of Dionysius Exiguus, before we can be sure that he really knew of the spurious Arabic canons of Nice. As to the propagation of canons supposed to be favourable to Rome, there is no historical difficulty whatever. The catholicism of Rome was for a long time most powerful, nay dominant, in the East. Besides the Latin kingdom of Jerusalem, there were the principalities of Tripoli and Edessa, the latter extending beyond the Euphrates. The principality of Antioch lasted for more than a century and a half. There was the nation of the Maronites, and there was the Armenian kingdom under the house of Rupen. In Alexandria one of the Melchite patriarchs was in communion with Rome, and sent a deputy to the Lateran Council. It is not improbably to his influence that the "Filioque" has found its way into the canons attributed to St. Hippolytus. This, too, is the time of the daring fraud of the "ancient missionaries" denounced by the learned Dominican Lequien in his *Panoplia contra Graecos* (p. xiv), and of those "spurious and lying testimonies" forged in support of papal authority which imposed upon St. Thomas Aquinas and all Latin theologians for many centuries.

The Arabic canons themselves, however, furnish us with a clue which enables us to conjecture their origin with a great amount of probability. De Marca long ago called attention to the canon which placed the island of Cyprus under the jurisdiction of the patriarch of Antioch. *Is fecit cui prodest*. The Maronite patriarchs of Antioch exercised jurisdiction in Cyprus over several bishops and churches of their own communion, and it was most probably in their interest that the canon was forged in justification of an ecclesiastical arrangement directly at variance with ancient rule. If the fraud owes its origin to a Maronite hand, it is not to be wondered at if in some of the canons great authority is ascribed to the Bishop of Rome.

Fraud and forgery are not pleasant words, but they are unfortunately unavoidable in a discussion of the pontifical claims which Archbishop Benni has at heart. And if the whole truth must be spoken, his own book is itself no better



than a pious fraud ; in saying which I do not wish to imply that the Archbishop is not the dupe of his own legerdemain. Far less would I wish to make any imputation on the excellent Italian priest by whom the book has been made accessible to English readers, and whose perfect sincerity in the pursuit of truth and knowledge is beyond all suspicion.

P. LE PAGE RENOUF.

**The Patriarch and the Tsar.** The Replies of Nikon. By William Palmer. Trübner and Co., 1871.

THE general impression this book leaves upon us is that there is a good deal of fine confused cursing up and down it. Nikon overwhelms his adversaries with torrents of invective from the Bible and the Fathers and the Councils against the sins which he chooses to impute to them (and his instinct is generally sound), and now and then clenches the matter with a vigorous bit of denunciation of his own. To appreciate the full oddity and the full impressiveness of the book it ought to be read through ; perhaps the best single passage to which to refer the reader is the peroration which contains an elaborate series of instances of boldness and audacity, drawn up because Nikon had been accused of audacity and wished to retort the charge. The following is a curious specimen of "boldness," "With boldness the children of Israel 'groaned by reason of their bondage.'" Of course Nikon was a barbarian, and his sense of the ridiculous had received at the best a very one-sided development : he accumulates forty pages of quotations from the Old Testament in the New, to prove that uninspired writers ought never to dispense with an appeal to authority. Feeling himself that this was, if possible, a superabundance of testimony, he puts a cross at the beginning and at the end, that weak brethren may skip ; but in general the torrent of quotation flows unchecked. Prince Nikita Orloffsky was employed to draw up a sort of handybook of Russian law, rather too much in the interest of the Tsar. Among other things this code enacted that the church property in the suburbs of Moscow and other cities should revert to the State. Nikon will not allow that the church has or can have property, and writes out several chapters of the Pentateuch about the Levites and the suburbs assigned to them, because they had no heritage, and then breaks out into something like eloquence :—

"Consider, thou fighter against God, Prince Nikita, how thou speakest of those suburbs as belonging to the patriarch, and to metropolitans, and bishops, and monasteries. Do they not all belong to God ? And we belong to Him, all, except thou and such as thou. Ye are not His."

Again, Nikita had enacted penalties against those who perjure themselves after kissing the cross—a form of oath consecrated, one might have thought, by the example of St. Vladimir, who commended it in his historical testament to the respect of his sons. But Nikon could not remember any Greek precedent to authorise the national oath, so he writes out two or three curious pages of St. Chrysostom against swearing in the abstract, to prove that unauthorised oaths are a mortal sin, which he reviles Nikita in a running fire of parentheses for committing. These instances are sufficient to show that Nikon's replies are quaint enough to compensate for their prolixity, and there is one very picturesque account of a scene with the imperial commissioners in which he had an opportunity, which he used to the full, of imitating St. Basil defying his persecutors. To most Western readers it will be new to find the Canons of Carthage and Sardica, including the one on appeals to Rome, part of the recognised common law of the Russian Church in the seventeenth century, while the official history of the apostasy of the Pope, which is dated from Formosus, and his con-

sequent deposition from his primacy among the patriarchs almost makes the efficacious businesslike romance of the Pseudo-Isidore respectable.

Students to whom these considerations are familiar will be apt to complain that an isolated translation of a pamphlet, which even without the appendix attains the dimensions of a history, is hardly the most useful supplement to such an history as Mouravieff's, especially as the questions of the Boyar Simeon Streshneff, and the answers of the Metropolitan, Paisius Ligarides of Gaza, are only given in an analysis, which is not full enough to enable us to judge of this plausibility. We have only the skeleton of the secularist indictment, while the hierarchical defence is given *in extenso*.

For the replies of Nikon are quite sufficient to prove that the real question at issue was whether the Patriarch or the Tsar was to be supreme in Russia, and that we cannot resolve it away into an ordinary quarrel between barbarous nobles and an overbearing favourite. Nikon's own *ex-parte* statement gives the impression that in the actual dispute he was substantially in the right (though it is strange that he should have imagined he was honouring the sacraments by refusing them to criminals under sentence of death), but that his difficulties were in great measure of his own creation, and that he did not choose his ground for resistance well.

Nikon's aim was to restore in Russia the purity of the Byzantine Church, just as it was the aim of the Tractarians to restore in England the purity of the Church of the Fathers. Like them he hated liberalism and modernism as much as slovenliness, though he had more to do with the latter, and only knew the former in the shape of importations of Polish pictures and quotations from Aesop's fables. He had all their energy, all their singlemindedness, all their obstinacy, all their scrupulosity. He could not have their culture—which would not have saved him, as it did not save them, from attributing an unreal homogeneousness to the past, and trying to build upon a mirage.

When first chosen to the patriarchate, he exacted a pledge of spiritual obedience from the Tsar and the nobility. When the Tsar absented himself from public worship, he protested solemnly in the presence of the people that he could no longer act as patriarch. He seems to have been influenced partly by the duty, as he regarded it, of fleeing from persecution, partly by a sense that, as the Tsar by encroachments on church property and by subjecting ecclesiastical persons to his own courts had broken one side of the compact, he could no longer be held to the other. He really "struck," and it was not for two years that his opponents formed the design of treating this strike as a resignation vacating the chair. Meanwhile Nikon had had time to recollect himself and to reconnoitre the strong points of his position. The Tsar had recognised him as patriarch after his protest, and there was no ecclesiastical authority in Russia competent to deal with a patriarch. It was worse than useless to hope to cope with him by importing a Pangloss in *partibus* like Paisius, who had committed two plain and almost unpardonable offences against ecclesiastical law by living in Latin communion and accepting Latin orders, and again by interfering in Russia beyond his nominal diocese at all.

The incurable weakness of Nikon's position was that the Tsar was the real centre of everything in Russia. One Tsar had fetched some patriarchs from Constantinople to make him a patriarch of his own ; another could always fetch some more when he was tired of the particular plaything called Nikon. The *prestige* of the Tsar more than half subjugated Nikon himself ; his bitterness against his other opponents goes to the full measure of what a prelate in the seventeenth century permitted himself ; his bitterness against the Tsar

never carries him beyond the measure of what a prelate or at least a religious newspaper might think permissible in the nineteenth.

G. A. SIMCOX.

First Part of the *Royal Commentaries* of the Yncas by the Ynca Garcilasso de la Vega. Translated and edited, with Notes and an Introduction, by Clements R. Markham. London: printed for the Hakluyt Society. Vol. I., 1869; Vol. II., 1871.

MR. MARKHAM'S translation was so much the more necessary as Garcilasso's great work was to this day almost untranslated. Sir Paul Rycaut's elucubration, published in London in 1688, and dedicated to James II., is only an abridgment, omitting no less than fourteen out of the twenty-six chapters in the first book and seventeen out of the twenty-eight in the second. Besides, the worthy knight (for such was Rycaut's title), who happened to be but very slightly acquainted with the Spanish tongue, had a trick of wildly guessing at the sense, which process was very ingenious indeed, but not so accurate as it might have been. Of the innumerable blunders with which he interspersed his version of the *Royal Commentaries*, Mr. Markham cites one which is characteristic. Speaking of "five Indians in Cuzco who played the flute very well from any music-book for the organ that was placed before them," Garcilasso adds, "*Eran de Juan Rodriguez de Villalobos vecino que fue de aquella ciudad*."—"They belonged to Juan Rodriguez de Villalobos, formerly a citizen of that town" (l. ii. ch. xxvi.). Rycaut renders it: "They belonged to one Juan Rodriguez, who lived at a village called Lobos, not far from this city."

In the short preface with which the first volume opens, Mr. Markham has summed up very exactly the little we know of Garcilasso's life. He was born at Cuzco in 1540 from Garcilasso de la Vega, "one of the few honourable cavaliers of noble blood among the conquerors of Peru, and Ñusta Isabel Chimpa Ocllo, grand-daughter of Ynca Tupak-Yupanqui. He was brought up amidst the civil wars which raged for years in the newly conquered empire.

"Almost every week, he tells us, some of the relations of his Indian mother came to visit her; and on these occasions their usual conversation was on the subject of the former grandeur of the fallen dynasty, of its greatness, of the mode of government in peace and war, and of the laws ordained by the Yncas for the good of their subjects. The half-caste boy listened eagerly to these conversations; and at last, when he was about sixteen or seventeen years old, he began to put questions to an old Ynca nobleman, who was his mother's brother, and received from him the story of the origin of the Ynca dynasty."—"The young Ynca had a wonderful start of all contemporary travellers, for he was born, as it were, in the midst of his work, and began to store his material as soon as he could speak."

However, he did not use it so soon, for after his father's death in 1560 (not in 1550, as Mr. Markham, through a printer's mistake, seems to say), being just twenty years of age, he left America for ever, went to seek his fortune in Spain, became a captain in the army of Philip II., and never dreamt of composing his countryman's history until forty years later, at which time he must have forgotten a great part of what he had heard in his boyhood. So he wrote to all his surviving schoolfellows, "asking them each to help me by sending me an account of the particular conquests which the Yncas achieved in the provinces of their mothers," which they did accordingly. He then made careful extracts from such of the Spanish historians as had spoken of Peru, Cieza de Leon, Agustin de Zarate, Gomara, Acosta, and, above all, Blas Valera, whose papers, half destroyed by the English in 1596, are now entirely lost. At least the fourth part of the *Royal Commentaries* is copied almost word for word from those historians, so that I think there is a little exaggeration in Mr. Markham saying that without Garcilasso's work "our knowledge of the civilisation

of the Yncas, the most interesting and important feature in the history of the New World, would indeed be limited." If, by some mishap, the *Royal Commentaries* had been lost, we would find in Cieza de Leon and the others nearly all the material that a "rather garrulous" Ynca has drawn out in his long-winded narratives, especially possessing, as we do now, the works of some posterior writers, Herrera, for instance, or Montesinos, whose importance for the early periods of Peruvian history is almost unrivalled. I know Mr. Markham is not of the same mind, and sets but little value on the information of Montesinos, whom he looks upon as a second-hand authority. If I be allowed to express my opinion here, I think Montesinos is now treated by Peruvian scholars as Manetho was by the chronologists of the seventeenth and eighteenth centuries. Before the dawn of Egyptology, almost all the critics had adopted entirely the traditional data of Herodotus, Diodorus, and other classical writers of greater or less authority: they held the Manethonian lists of Egyptian kings to be mere fictions, and did not give them much more reality than that Mr. Markham seems inclined to give to Montesinos' lists of Peruvian sovereigns. We know how the case of Manetho *v.* Herodotus ended, and how it was proved that after all "that impostor of a Sebennytian priest" was perfectly right. I am very ready to admit, not that all the traditions collected by Montesinos from the mouth of the *Amautus* are historical truth itself, but that they are a nearer approach to historical truth than some of the traditions inserted in Garcilasso's *Royal Commentaries*.

I need not say that Mr. Markham's translation is most accurate. Mr. Markham's accuracy as a translator has been well known since he published for the Hakluyt Society the *Narrative of Pascual de Andagoya*, the *Travels of Cieza de Leon in the Years 1532-1550*, the *Life and Acts of Don Alonso de Gusman*, 1518-1543, and other equally interesting works from the time of the Conquest. The notes, philological as well as historical, derive a great interest from the fact of Mr. Markham having personally explored Peru and learned the Quichua tongue. The two maps in the second volume, exhibiting one the plan of Cuzco, ancient and modern, the other the Sacsahuaman or great Ynca fortress of Cuzco, are very serviceable to make the reader understand the chapters which contain the description of the imperial city of Cuzco (book vii. ch. viii.-xiii.) and of its fortress (book vii. ch. xxvii.-xxix.).

G. MASPERO.

### New Publications.

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- KENNER, F. Ueber die römische Reichsstrasse von Virunum nach Ovilaba u. über die Ausgrabungen in Windisch-Garsten. Wien: Gerold's Sohn.
- LÜBECK, Urkundenbuch der Stadt. Band IV. Lfg. 11, 12 (Schluss). Lübeck: Grautoff.
- SCHULTE, J. F. v. Die Glosse zum Decret Gratians von ihrem Anfang bis auf die jüngsten Aufgabten. Wien: Gerold's Sohn.



## Philology.

**An-Nadim's Index of Arabic Literature.** [*Kitāb al-Fihrist*, mit Anmerkungen herausgeg. von Gust. Flügel. Nach dessen Tode besorgt von Joh. Rödiger und Aug. Müller. Zwei Bände. Mit Unterstützung der Deutschen Morgenl. Gesellschaft. Zweiter Band, die Anmerkungen und Indices enthaltend. Von Aug. Müller.] Leipzig: Vogel.

Not much later than it was promised appears the second volume of this very important work (see *Academy*, vol. iii. pp. 17-19), by which the text already published is for the first time made fully available for study. One is almost sorry that the publication of the first part was not delayed till the second could appear with it, for no doubt many an one will have been too impatient to put off the study of the text, much as he may have wished for the notes, while to read the commentary afterwards by itself is of but little use, even if it be possible.

The commentary is Flügel's own work. The editor, Dr. Müller (a *Privatdocent* at the university of Halle) has been at the pains to subject the almost completed but not finally revised manuscript to a careful but considerate redaction. He has made few additions of his own.

It is clear that Flügel worked at these notes for many a long year. Only a man of his untiring industry and wide reading, especially in the literary histories and bibliographical works of the Arabs, could accomplish such a task. He also benefited by the counsel of his old friend, Professor Fleischer, the undoubted chief of living Arabic scholars; I seem to detect this wholesome influence in other passages besides those in which it is mentioned.

The importance of the commentary consists not so much in the explanation of the subject-matter as in the literary notices. And rightly so, not only because the work of An-Nadim himself is predominantly bibliographical, but also because a complete explanatory comment, even if such could be produced by a single scholar, would have assumed far too large dimensions. The literary notices are all the more copious, sometimes rather too much so, as when he quotes the secondary and the original authorities side by side, e.g. the *Marāʿid* together with *Yākut*. With regard to the Arab scholars mentioned in the *Fihrist*, the material supplied by printed texts is quoted almost *in extenso*, and much from manuscripts besides. But the notes also contain much that illustrates the text in other ways, e.g. the translation of many difficult passages, especially the poetical ones—a great boon to the reader. Here and there, too, the subject-matter is for good reasons explained at greater length. We are thus presented with many valuable additions and corrections to the earlier work of Flügel on the section relative to Mani. His notes on the equally important but extremely obscure section on the heathen of Harrān are naturally less copious, because here he was limited to conjectures. The present writer has been also much occupied with these chapters, especially the darkest of all, that on the mysteries, and thinks he is in a position to solve some of the difficulties, especially by a retranslation of the strange-looking sayings into Syriac. But we are not here upon solid ground; at any rate matters of this kind are better treated in a monograph.

The commentary also contains much that relates to the criticism of the text. I notice especially that the deficiency complained of in my review of the first volume—the omission of the variants to the section on Mani—has been completely remedied, the variants being supplied by the editor according to a new collation.

It is but natural that a work of such innumerable details should not be without mistakes and hiatuses. Every

Orientalist who is in any degree at home in one of the many departments touched upon in the *Fihrist* will be able here and there to offer corrections and additions, without any disparagement to the uncommon merits of the author. Flügel himself often modestly admits that he was unable to explain this and that point, particularly where the subject is one which only concerns the Arabist indirectly. I mention this in order to prevent the few small additions and corrections which a varied reading has suggested to me in several passages from being interpreted in the light of a disparagement to the author.

To the careful discussion of the word *libr* (Anm. 6, p. 9) I may be allowed to add that it seems to be used of the common black ink in two late and incorrect Syriac receipts for the preparation of that fluid (Wright's *Catalogue of Syriac MSS.* pp. 580b and 581a).—Page 23, line 23, the corrupt and misread word *mohṭawī* conceals the Syriac *bēth mar-tēbhē*—the name given by the Nestorians to those books of the Old Testament which belong neither to the Pentateuch nor strictly to the Prophets. The fact that this catalogue of the books of the Bible is really of Nestorian origin was mentioned in my review of the first part. This accounts further for the mode of writing "Ruth" with an 'Ain, which struck Flügel as peculiar; in line 7, where a Jewish authority is used, the word is naturally given according to the Hebrew orthography without that letter.—In the discussion of the original conclusion of the great historical work of Tabari and its appendices (Anm. 5 to p. 234), special reference should have been made to Ibn-al-Athir, viii. 68, of which more than half the first part is entirely based on Tabari.—The identity of the Mandaeans and the *Moghtasila* (Anm. 10 to p. 340), which I formerly accepted myself, is no longer tenable. The Elkesaites or *Moghtasila* have had great influence on the ceremonies and in part also the dogmas of the Mandaeans, but in other respects the two are very different. The celebrated verse in p. 142, 16, is not erotic, but refers to the relation of Nābigha to his princely patron, with whom he had fallen into discredit (cf. Ahlwardt's edition, No. 17, v. 28).—It must be due to a momentary forgetfulness that Flügel speaks of the poet 'Omar b. abī-Rabf'a as if an entirely unknown person (Anm. 17, p. 306).

The indices by Dr. Müller are comprehensive. They are obviously of particular value in a work of this kind, which within a comparatively small compass (I had supposed the *Fihrist* to be a much larger work from what I knew of the contents) contains such a vast amount.

As long as Orientalists continue to be instructed by the work of the excellent bookseller An-Nadim, so long will the name of Flügel survive as that of its first editor and expositor, who by discretion and persevering industry has accomplished more than many a scholar his superior in genius and width of view. In conclusion, hearty thanks to both the young scholars, by whose exertions this posthumous work has become accessible to us. TH. NÖLDEKE.

**The Semites in their Relation to the Hamites and Japhethites.** [*Die Semiten in ihrem Verhältniss zu Chamiten und Japhethiten.*] By J. G. Müller. Gotha: Besser.

THE table of generations in the 10th chapter of Genesis contains the ethnological theories of the Hebrews about the nations with whom they were acquainted at the time of the first kings. These all belong to Blumenbach's Caucasian race, and group themselves into three families of nations, with the three sons of Noah, Ham, Shem, and Japheth, for progenitors. It is probable that the popular Hebrew opinion of that time reckoned amongst the sons of Ham all the peoples that were akin, in language and civilisation, to

the Egyptians; amongst the children of Shem, all those that were similarly related to the Hebrews, who are designated as descendants of Shem; amongst the sons of Japheth, all the tribes standing in a kindred relation to the Medes and Greeks—a view which nearly every one who has studied the passage in question has read it as conveying.

The author of the book before us judges quite otherwise of this tenth chapter, inasmuch as he takes it to contain a scientific truth, rather than a popular belief. At least this is the only intelligible explanation of the way in which he dwells on its supposed inconsistencies, and undertakes to bring them into harmony with acknowledged scientific certainties. After the author has determined on etymological and antiquarian grounds that the five sons of Shem, Elam, Asshur, Arphaxad, Lud, and Aram, are Indo-Germans, he observes that the same must hold good for Eber, Joktan, and Jerah, the ancestors of the Hebrews, the Arabians, and the Chaldaeans, who were descendants of Arphaxad. But if this remark is applied to the whole nations, it would follow, as the author concludes, that the Hebrews, Arabians, and Chaldaeans were Indo-Germans, and spoke Indo-Germanic languages. But this view is opposed by their language, which we know, and which is, closely related to the language of Canaan; and Canaan is mentioned as a descendant of Ham. If these two facts are regarded as equally certain, nothing is left but to declare the Semites to be Hamitic Indo-Germans! According to Professor Müller there are properly speaking neither Semites nor Semitic languages, only Hamites and Indo-Germans. What we call Semites are only Indo-Germans who have adopted Hamitic languages, and what we are accustomed to call Semitic languages are at bottom only Hamitic dialects adopted by Indo-Germanic nations.

Though all these conclusions are correct from the logical point of view, there is much to be urged against them. In the first place, it is exceedingly hazardous to argue from the unknown to the known, *i.e.* from the nationality of the unknown Arphaxad to the nationality of the known Jews, Arabs, and Chaldaeans. In the second place, the proof on which the relationship of the so-called Semitic with the Hamitic languages depends is so far incorrect that it rests upon a complete misconception of the whole state of the question. None of the scholars who have pronounced the Semitic and Hamitic languages to be related suppose the relation to be as close as that between the Hebrews and Phoenicians, as the author, in support of his hypothesis, appears to assume.

The author seems altogether to have overlooked the contradictions into which one falls as soon as one begins to look upon the table of generations as a piece of ethnology, and is driven to accept the consequences that follow from it. For if we realise to ourselves the relation of this table to its author, we find only two possible alternatives: either the author started from a tradition still living amongst his countrymen, or he had made independent researches respecting language, customs, and other points of ethnological significance. On the first supposition it would be unreasonable to separate those Semites whom he looks upon as Indo-Germans from the other children of Japheth; while on the second hypothesis it would be impossible to defend him from the charge of shallowness, in placing Phoenicians and Egyptians in the same linguistic family.

We have therefore no choice but to follow the example of most unprejudiced Biblical scholars, and regard the genealogical table as a piece of popular ethnology of limited scientific value. It is consequently labour in vain to try to harmonize each point in it with the rest and with the results of modern science. It is self-evident from this that in

forming our opinion of the Semites as a nation we must restrict ourselves to such authentic data as language, literature, civilisation, &c., which determine the judgment of an ethnologist. We also see that the Semites, although linguistically related to the Hamites, yet are clearly distinguished from them and form a family by themselves. The Semitic languages are distant collaterals, not descendants, of the Hamitic, just as the Germanic languages are not daughters, but sisters, of Sanskrit. Indeed, Semites and Hamites stand much farther apart than the different groups of the Indo-Germanic family, for these agree in the formation of the cases as well as in their pronouns and roots, while Semitic and Hamitic languages only agree in their pronouns and a few roots, their conjugations and declensions being entirely different.

In conclusion we cannot refrain from observing that, although Professor J. G. Müller has collected a number of important facts respecting the history of Semitic civilisation, and has accompanied them by some excellent remarks, he has been led by his philological deficiencies in the field of the Semitic languages to a variety of unfounded hypotheses which will seriously impair the value of his work to theologians as well as to ethnologists. FRIEDRICH MÜLLER.

#### THE ENGLISH MSS. OF TERENCE USED BY LENG AND BENTLEY.

DR. FRANCIS UMPFENBACH, whose edition of Terence (Berlin, 1870) exhibits for the first time a complete collation of the most ancient MSS. of that author, including the Bembine, devotes an interesting article in the *Philologus* of this year (pp. 442-477) to a discussion on the MSS. not collated in his edition, but quoted by Lindenbrog, Leng, and Bentley. This discussion derives additional interest from the new light which Dr. Umpfenbach has thrown on the vexed question of the relation of the various families of Terentian MSS. to each other. Ritschl divided them into two classes: a more ancient, represented by the venerable Bembine, the Victorianus, and perhaps the Decurtatus; and a more modern, in which the recension of Calliopius, a grammarian of a comparatively late period, is followed. This theory is now disproved by the discovery that both the Victorianus and Decurtatus exhibit the Calliopian recension in a modified form, and corrected from the commentary of Donatus. This modified Calliopian recension appears also in parts of the Ambrosian, in the Vienna as well as in the Cologne fragments, and in the Laurentianus xxxviii. 27; it in fact constitutes a third family, distinct, on the one hand, from the Bembine, which stands alone in a class by itself, and, on the other, from the MSS. exhibiting the unmodified Calliopian recension. (See Umpfenbach's edition, pref. pp. i-iii, lxviii-lxix.)

After a discussion, more or less detailed, of the *vetus codex* of Lindenbrog, which A. Fritsch inclines to identify with a Paris codex now numbered 7905, and an article by Fritsch himself on the Codex Parisinus 7903A, a MS. belonging to that modified Calliopian group, of which the Victorianus and Decurtatus are the best known specimens, the English MSS. employed by Leng and Bentley are treated.

(1) Of the *Regii*, or MSS. in the King's Library, Bentley quotes several. The most valuable of these, described by him as *chartaceus sed ex optimo exemplari transcriptus*, is identified with a paper MS. of the fifteenth century now in the British Museum, and numbered Regius 15. A. xi.—a MS. of the modified Calliopian group, though differing from the Victorianus and Decurtatus in the order of the plays, which is that of the pure Calliopian recension, *Andria*, *Eunuchus*, *Heautontimorumenos*, *Adelphi*, *Hecyra*, *Phormio*. Where two *Regii* are mentioned, Dr. Umpfenbach considers it certain that the second is that marked 15. A. xii. of the tenth century; that he employed others as well seems rightly inferred from such expressions as *unus ex Regiis recentior* (see Bentley's note on *Hec. v. 4, 12*). Leng also used a MS. belonging to the King's Library; this, it would seem, was distinct from either of the two *Regii* above mentioned as Bentley's.



(2) Bentley speaks several times of a MS. which he calls *Academicus 900 annorum*. Among the MSS. which Leng used were two lent him by the Bishop of Norwich, which he styles severally *Na* and *NB*. In the characteristic passages, *Ad. iii. 2, 26, animam*; *Phor. iii. 3, 16, tum igitur*; probably also in the omission of *Phor. ii. 3, 7, neque eius—negat*, Dr. Umpfenbach concludes that Bentley's *Academicus 900 annorum* is Leng's *Na*. The writer of this article is indebted to the kindness of Mr. J. E. B. Mayor, late Librarian of the University Library of Cambridge, and just appointed to the chair of Latin recently vacated by Professor Munro, for a collation of the only MS. in that library which can be supposed to represent Bentley's *Academicus 900 annorum*. It is marked Ff 6 4, and did actually belong to John Moore, Bishop of Norwich, as Mr. Mayor concludes from the book-plate *munificentia regia 1715*, and the signature *J. Norwicensis* which appears on the first page. But that it cannot be Bentley's 900-year codex is placed beyond all doubt by a comparison of the readings which follow with those quoted from Bentley by Umpfenbach, p. 467, even if it were not certain that Ff 6 4 was not written in the ninth century.

## READINGS OF Ff 6 4.

<i>Andria</i> . . . .	iv. 4	54	<i>uolunt</i> .
	v. 4	25	<i>tibi</i> not over erasure.
<i>Eun.</i> . . . .	iv. 4	47	<i>ei</i> <i>oi</i> .
	" 7	19	<i>armis</i> without erasure.
<i>Heautont.</i> . .	i. 1	71	<i>incerto</i> .
	iii. 1	1	<i>luciscit</i> .
	" "	43	<i>Satrapes</i> .
	" "	48	<i>pitiasando</i> .
	v. 1	4	<i>dicta</i> .
	" 3	6	<i>faciã</i> .
<i>Ad.</i> . . . .	i. 1	16	<i>dissimili</i> .
	iii. 2	26	<i>animum</i> .
	" 3	68	<i>Denica</i> (without <i>o</i> ).
	" 4	5	<i>hac auduit</i> .
<i>Hec.</i> . . . .	iv. 4	1	<i>tibi quoque edepol sum iratus</i> .
<i>Pho.</i> . . . .	i. 4	15	<i>via</i> .
	" "	52	<i>deficies</i> .
	iii. 3	8	the line is not wanting.
	iii. 2	6	<i>Ans. ei metuo lenonem ne aliquid suo</i> <i>fiat capiti. Ge. idem timeo ego.</i>
	" "	47	<i>stergullinium</i> .
	" 3	16	<i>dum igitur</i> .
	iv. 3	14	<i>ut eius tentarem</i> [ <i>sic</i> , for the latter part of the MS. is a much later transcript] <i>sententiam</i> .
	" "	38	<i>libuit</i> (without interlineation).
	v. 3	9	<i>natum</i> (not after correction).

Nor, on the other hand, can the only other MS. of Terence now in the Cambridge University Library, that marked Ff 4 39, and which formed part of the original library given by Archbishop Rotherham, be the missing *Academicus*, for, besides that it does not agree in *And. iv. 4, 54*; *v. 4, 25*; *Eun. iv. 4, 57*, the three cardinal passages in which it was collated by Mr. Mayor, it cannot be older than the fifteenth century. (See pp. 472, 511, vol. ii. of the Catalogue of MSS. in the University Library of Cambridge.)

(3) Leng used for his edition (1701) a MS. belonging to Frevile Lambton, Esq., *ex agro Dunelmensi*, i.e. in the county of Durham. Frevile Lambton's pedigree may be found, as indicated to me by Mr. Mayor, in Surtees' *Durham*, iii. 36. He was buried August 28, 1731, *æt. 70*. He was owner of Hardwick Park, Sedgfield, in that county. The MS. which is called by Leng *Dunelmensis* had at the beginning of every scene coloured figures of the actors, and at the beginning of each play a pictured *aedificula* or small cabinet containing the masks. Two leaves were wanting, one containing *And. iii. 1*, the other *And. iv. 3*. Both Krauss and Brix agree in supposing this codex to be identical with that called by Bentley *veterrimus*; it would be interesting to prove whether this conjecture is well founded; but the MS. has not been forthcoming for the last 150 years, and, like the far more valuable Cologne MS. of Silius Italicus, is perhaps no longer discoverable. Leng calls this much the finest of all his MSS., and any one who would bring the lost treasure to light would confer a service which would be appreciated by every student of Latin philology.

(4) After a short description of the *Petrensis* and *C. C. C.*, the one belonging to Peterhouse, now St. Peter's College, the other to Corpus Christi College, Cambridge, two MSS. used by both Leng and Bentley, Dr. Umpfenbach comes to the *Ship-*

*penianus*, a MS. lent to Leng by Robert Shippen, Fellow (afterwards Principal) of Brasenose College, Oxford. Here, at any rate, we are able to clear up a doubt, for this MS. is certainly that now in the library of Brasenose, numbered xviii. in Coxe's Catalogue (*Catalogus Codicum MSS. qui in Collegiis Aulisque Oxoniensibus hodie adservantur*, Oxonii, 1852), and assigned by him to the eleventh century.

Of the other codices of Terence briefly noticed in the *Philologus*, nothing need be said. The Oxford *Donatus*, occasionally cited by Bentley, may be No. xlv. in the library of Lincoln College, a parchment MS. of the fifteenth century: it is perhaps more probable that it was one of those in the Bodleian.

R. ELLIS.

## UNIVERSITY ORGANIZATION.

SOME scientific men, and some resident and other members of the Universities of Oxford and Cambridge, have been holding a conference to consider the low state of learning and science in the two older universities—its causes and its remedies. The impulse to the movement at this particular time has been given by the commission which is now enquiring into the revenues of the colleges, and which is expected to report next session. The wildest and most diverse schemes are floating in the air for the appropriation of these endowments, each of which schemes will no doubt find backers when the time comes. The fear is that there may be a scramble, and that a government dependent for its existence on a House of Commons majority may find it expedient to distribute the treasure-trove among the clamorous. The friends of learning and science, who might not unreasonably claim the whole, come forward asking to be first considered. They based their combination and their further proceedings upon a resolution which ran in these words:—

"The chief end to be kept in view in any redistribution of the revenues of Oxford and Cambridge is the adequate maintenance of mature study and scientific research, as well for their own sakes, as with the view of bringing the highest education within reach of all who are desirous to profit by it."

This resolution was signed by about seventy names, and was followed up by a conference or consultation of the persons signing, as to the development which should be given to the general proposition thus affirmed. The meeting was held at the Freemasons' Tavern on the 9th November. Among those who took a part in the proceedings were Sir Benjamin Brodie, Drs. Carpenter, Burdon-Sanderson, Appleton; Professors Rolleston, Huxley, Seeley, Clifford, Robinson Ellis, Thigelson Dyer; Messrs. Mark Pattison (Rector of Lincoln College), Ray Lankester, Henry Sidgwick, Newton (of the British Museum), A. J. Ellis, Sayce, Bywater, Sidney Colvin, Simcox, Cheyne, &c.

A discussion was taken on the following topics:—Research in Physical Science compared with that in other sciences in England; National Importance of Mature Study as a means of increasing Knowledge; Importance of Research as improving the Quality of Education; the Abolition of Prize Fellowships; Necessity of an Increase in the Number of Professors; the Introduction of new Branches of Study, *e.g.* Archaeology; the better Organization of the Teaching in the already existing Branches; &c.

It was distinctly stated in the course of discussion that this was not a political movement, and that its object was not to back up the present, or any, government in any political measure. Those present were there to consider purely academic and scientific interests. Great dissatisfaction was expressed at the present bestowal of the endowments. An annual revenue, vaguely estimated at 170,000*l.*, is spent in educating about 2000 students. Of these two thousand, it is a low estimate that more than half are "passmen," and passmen may be said to learn nothing worth learning, but spend three years in arriving at the degree of a B.A. Of the other, and smaller, half of the student body, the education is more or less successful. But there was not the same unanimity as to the exact value to be assigned to the results of the education of the "honour" students. Dr. Rolleston thought that great advantage was obtained for the public, by passing a number of mediocre men through a mill which makes them useful machines in their country. At the same time he intimated that examinations for fellowships, where the candidates were older, and therefore ought to have made special studies, was an unsatisfactory repetition of the examination for degree.

He thought that examination was in its place and useful as a stimulus for younger pupils.

Dr. Carpenter dwelt on the necessity of providing a maintenance for men whose hearts were in the work of research. If England was behind Germany in original investigation, it was not, as is sometimes said, because Englishmen are inferior to Germans in ideal power, but because the German universities are so arranged as to afford a career to men who choose to devote their lives to study. In England such young men, having no means of making a livelihood by the pursuit of science, are obliged to turn their attention to a "practical" profession.

Sir Benjamin Brodie wished to found in the universities certain specific institutions for the promotion of scientific research. He knew we should be told that this was not an object about which the nation should care. But he pointed to certain institutions which England does keep up, and at very considerable cost, which have solely science for their object. Such are the Royal Observatory at Greenwich; the Meteorological Observatory at Kew, and, above all, the British Museum. The universities with all the means at their disposal did nothing of this kind, the Radcliffe Observatory and the Bodleian Library at Oxford being both private foundations. He would not trust to the growth of professorships singly, but would like to see certain specific institutions representing the various departments of human knowledge. Such institutions should not be disconnected from the work of teaching, but should fulfil the very highest educational work, viz. the training up for the service of the country a body of teachers in the respective sciences.

Professor Seeley argued the uselessness of the fellowships as at present bestowed. He met the argument usually urged by the defenders of fellowships, viz. that they give talent a start in life, by asking why the professions should be specially provided with such advantages rather than any other career? The fellows of colleges were not a class of men with whom any fault can be found. They are all occupying themselves in some way usefully, only not in science, learning, or mature study.

The Rector of Lincoln deprecated the notion of pulling down the present tuitional system, and setting up a professorial in its place. This was the idea of the Commission of 1854, and it had proved an entire failure at Oxford. The tutors had beaten the professors out of the field: for the tutors kept tight hold of the university examinations, and with this powerful leverage to work with, they made it impossible for a professor who gave instruction in the higher parts of his subject to get a class to attend him. He wished to set about reform not by destroying the existing teaching machinery, but by raising its level. Nor would he abolish the fellowships, but convert them. The present mode of bestowing fellowships was indefensible. A fellow had no duties. He would convert the college fellowships into a body of teachers, on a graduated scale, so arranged that the whole body should be connected with education; but while the lowest grade should be wholly occupied in teaching, the highest grade, to rise to which time would be required, should be exempt from the drudgery of lecturing. In this way only could the love of learning and the spirit of research be introduced among the tutors. The best of the tutors felt keenly the pernicious effect of the grind to which they were at present subjected, and would gladly be relieved from it. But the system was too strong for them. As to the proposal of affiliating colleges, or sending teachers out of the universities to the centres of population, he should not see any objection to doing so, provided that these branches were in close connection with the organized hierarchy of instructors whom he would set up in the place of the college fellows.

Mr. Newton urged the desirability of introducing the study of Archaeology into the universities, of organizing it in connection with the existing collections, and of reuniting it to the pursuit of historical research. The study of archaeology requires, first, museums where practical acquaintance can be made with the monuments, and curators for the charge of those museums; and, next, professors to bring before students the last results of archaeology throughout Europe. The British government and private enterprise had done much for the collection of archaeological materials in this country. Their systematic employment was a task which ought to be fulfilled by the universities.

After the discussion, which was broken off at this point by the lateness of the hour, the persons present agreed to form themselves into a "Society for the Organization of Academical Study."

## Intelligence.

The last number of the *Altpreussische Monatsschrift* (vol. ix. parts 5 and 6) has an interesting though somewhat superficial account of the High German dialect of East Prussia, by G. Hoffheinz. It appears to be of a highly composite character. Not only has it been strongly modified by the Low German of the bulk of the earliest colonists, but has also adopted many words from the Slavonic dialects of the original inhabitants. It is important to observe that the writer distinguishes between the *j* of *Jeist* and that of *Jott* (= *Geist* and *Gott*), the former being a pure *j*, the latter a more guttural sound, which precise one it is impossible to tell from his account. Here, as elsewhere, the weakness of his phonetics is to be regretted. Thus, after stating that *s* before *t* and *p* becomes *sch*, he goes on to say that the same is the case in the pronunciation of Greek, which he expresses by writing *σχυουδη* for *σπουδή*!

A new review has been set on foot at Hongkong, under the title of *The China Review*. It is edited by Mr. N. B. Dennys, the former editor of *Notes and Queries on China and Japan*, the extinction of which useful serial has been so much regretted. The place of honour in the first number is given to a paper on Dr. Legge's *Shikking*, by the Rev. E. J. Eitel. The review is intended to appear every two months.

A new edition of the *Mahabhashya*, Patanjali's great commentary on the grammatical Sūtras of Pāṇini, with the commentary called *Bhashya-pradīpa*, and a new commentary by Pandit Rajarama, from the Benares College, has just been published in that city. This is the first complete edition of this important work ever printed; as the late Dr. Ballantyne's edition comprises only the fourth part of the first *Adhyāya*, and therefore only the thirty-second part of the above complete edition.—*Triibner's Record*.

The *Göttingische gelehrte Anzeigen*, No. 44, contains a review of recent works on the Assyrian language and antiquities by Schrader, Sayce, Lenormant, and Finzi. The well-known writer who signs himself H. E. expresses himself without the slightest reserve in favour of the decipherers of the inscriptions, and only exhorts them to caution in the comparison of other languages. H. E. differs from Professor Schrader (*Academy*, vol. iii. p. 340) in ascribing but little scientific value to the syntax in Mr. Sayce's grammar; the reader will do well to verify H. E.'s report of the contents of that book for himself.

On December 3, Mr. George Smith, of the British Museum, will read a paper before the Society of Biblical Archaeology on "A Cuneiform Inscription containing the Chaldaean Account of the Deluge." We hope this important text, which is said to resemble the story in Berossus, will be published as early as possible. It is on one of the clay-tablets found by Mr. Loftus at Warka.

M. de Campos Leyza has written a *Clef de l'Interprétation hébraïque* in 612 large octavo pages (Paris: Maisonneuve). He there "demonstrates" that there are about fifty fundamental roots, of which about forty are onomatopoeic. The work, we regret to say, is absurdly unscientific, and only shows how much the study of Hebrew in France lags behind that of other Oriental languages.

## Contents of the Journals.

*Jüdische Zeitschrift* (Geiger), vol. x. No. 4.—The Prefaces of Saadia to *Agron* and *Galut*. [Based on an account by Firkowitsch of the newly discovered prefaces to Saadia's lost works, *Agron* and *Galut*. The Hebrew prefaces (there is also an Arabic one) to the former work is also given in full from the Hebrew serial *Lebanon*. Firkowitsch states that he also possesses other works of Saadia, including a fragment of his commentary on the Pentateuch.]—On the Moabite Inscription; by J. Auerbach. [Reads, l. 17, 18, יהוה ואשר, כל or חם), i.e. "Mesha burnt all the Levites of Jehovah before Chemosh;" לִי = cf. Olshausen, *Lehrbuch*, p. 413. Geiger also proposes to read, l. 13, 14, אֵשׁ חֶרֶת, "the men of Chereth": cf. 1 Sam. xxii. 5.]—On Jer. xx. 17. [חֶרֶת, not st. const. of חֶרֶת, but a noun, found in *Berachoth*, 44b, 57b, *Abodath Eliin*, 29a = "womb."]—An Unknown Commentary on Sifra; by M. Steinschneider. [MS. No. 59 at Munich.]

## New Publications.

MÉNANT, J. Les Achéménides et les Inscriptions de la Perse. Paris: Maisonneuve.

## ERRATA IN No. 60.

Page 433, col. 2, line 19, for "seizes" read "serves."  
" " " " " 33, for "some" read "none."

The essential point of Pasteur's communication consisted in regarding any portion of a living organism when deprived of access to oxygen as capable of acting as a ferment in respect to fermentible substances in contact with it.